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ATLAS

OF

PATHOLOGICAL ANATOMY

For reference only.

ATLAS

OF

PATHOLOGICAL ANATOMY

BY

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AND

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Artist

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TRANSLATED BY

W. S. GREENFIELD, M.D.

With Additional Plates, Drawn by
Mr. W. HURST

LONDON
J. & A. CHURCHILL, NEW BURLINGTON STREET
1880

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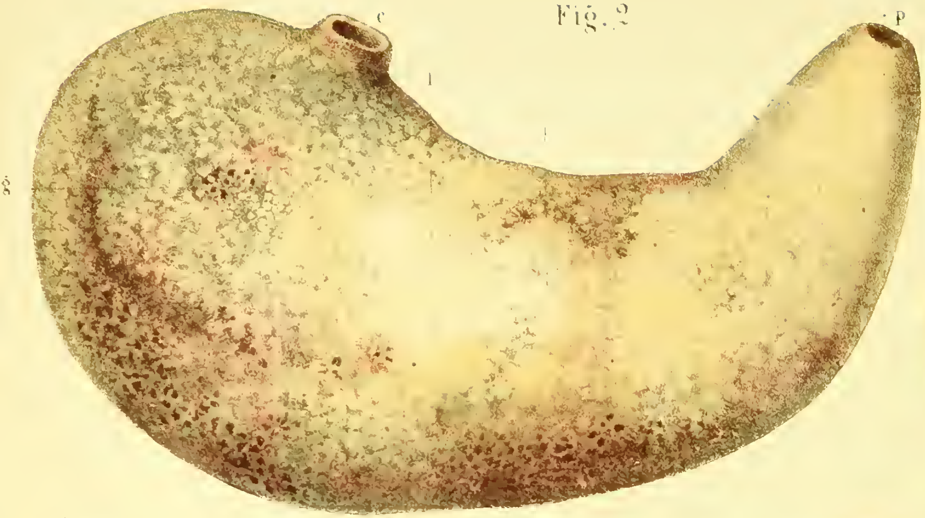
TRANSLATOR'S PREFACE.

The want of an Atlas of Pathological Anatomy, suitable for the use of practitioners and students of medicine, has long been felt. Lancereaux's Atlas is well-known in France, but though often referred to in this country, is not largely used. The very large amount of work contained in so small a compass, and its general accuracy, renders it a useful work of reference, and it has been thought that it would be more generally used in an English dress. It was the intention of the Translator to give a complete translation of the text, which forms a separate volume, and contains a large amount of valuable clinical and pathological material; and to have added to it such notes and references as might bring it up to the level of more modern observation and research. It was found, however, that this would not only necessitate an entire remodelling of the work, but would involve a great delay in its publication, and this project has, therefore, with the Author's sanction, been abandoned, after much labour had been expended upon it.

In its present state, only the Plates and their description are given, and ten Plates have been added to make the work more complete in some particulars. For the use of some of the original drawings the Translator is indebted to Dr. Sutton, the remainder have been drawn by Mr. W. Hurst, from original specimens.

Fig. 2



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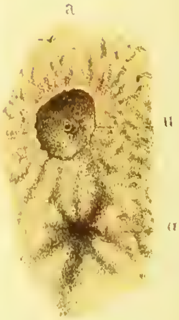

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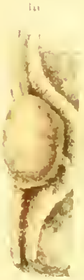

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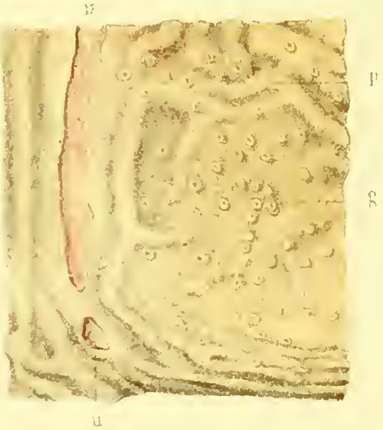

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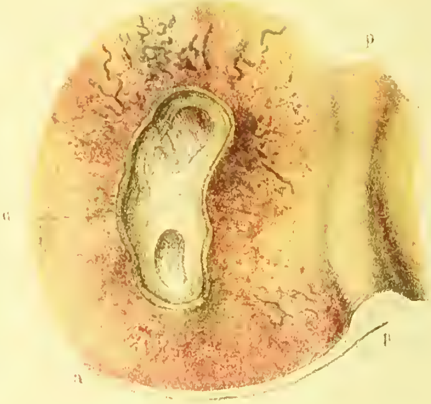

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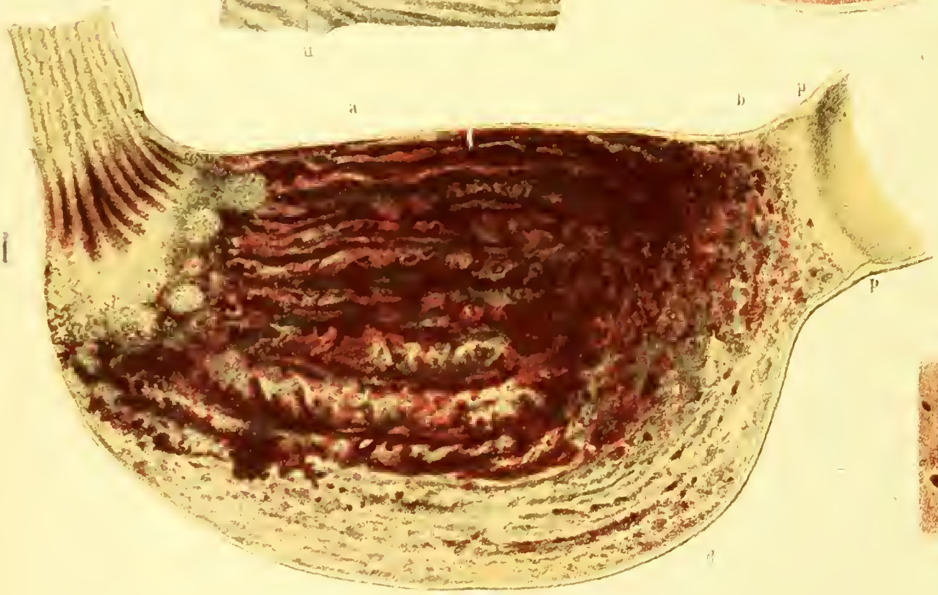

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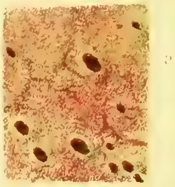

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PLATE I.

Fig. 1.—Gastritis from Sulphuric Acid (half nat. size). Stomach opened along its lesser curvature *a*; *c*, cardia; *p p*, pylorus; *b*, portion where the mucous membrane is destroyed, exposing the intensely congested submucous tissue; *d*, greater curvature.

Fig. 2.—Alcoholic Gastritis (half nat. size). Stomach turned inside out, and one surface only drawn; *c*, cardia; *p*, pylorus; *l*, milky white patch, consisting in part of white nodules; *i*, vascular patch; *g*, hypertrophied glands.

Fig. 3.—Glandular Cyst of the Stomach (nat. size). A part of the wall of the stomach; *m*, mucous membrane separated and turned back; *g*, a gland with thickened walls, containing serous liquid; *c*, duct of the gland.

Fig. 4.—Alcoholic Gastritis with a Deep Ulcer (nat. size). Pyloric region of the stomach; *p*, pylorus; *a*, hypertrophied wall; *u*, ulcer of elliptical form, laying bare the muscular coat at each end; numerous varicose vessels are seen in its neighbourhood.

Fig. 5.—Perforating Ulcer of the Stomach (half nat. size). Cardiac portion of the stomach; *c c*, cardiac orifice; *a*, ulcer, situated about three-quarters of an inch from the orifice; *u*, orifices of the eroded splenic artery at the bottom of the ulcer.

Fig. 6.—Hæmorrhagic Erosions of the Stomach (nat. size). Inner surface of the mucous membrane (from the pyloric region of the stomach) strewn with circular or elliptical depressions, the bases of which are covered by a clot of blood.

Fig. 7.—Uræmic Gastritis (nat. size). Pyloric portion of stomach; *u*, superficial ulcers in the neighbourhood of the pylorus; *p*, folds of the mucous membrane; *g*, hypertrophied and prominent glands.

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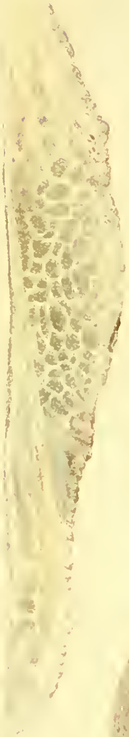

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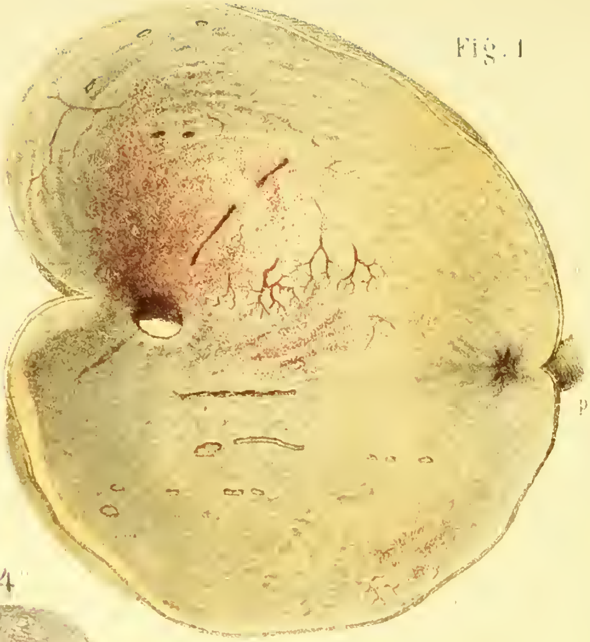

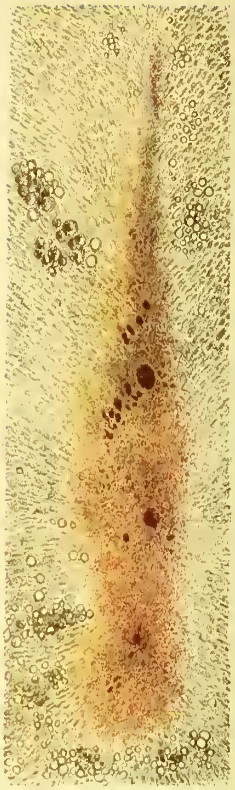

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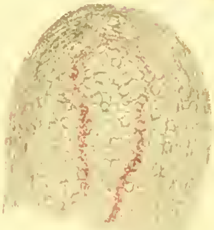

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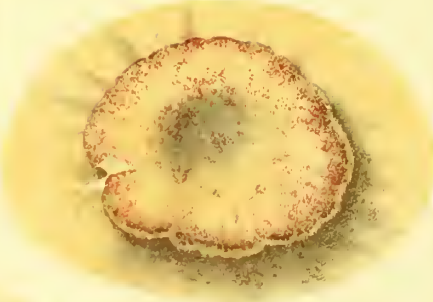

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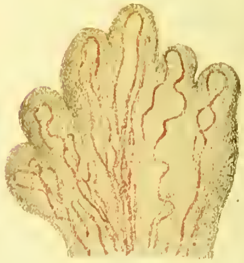

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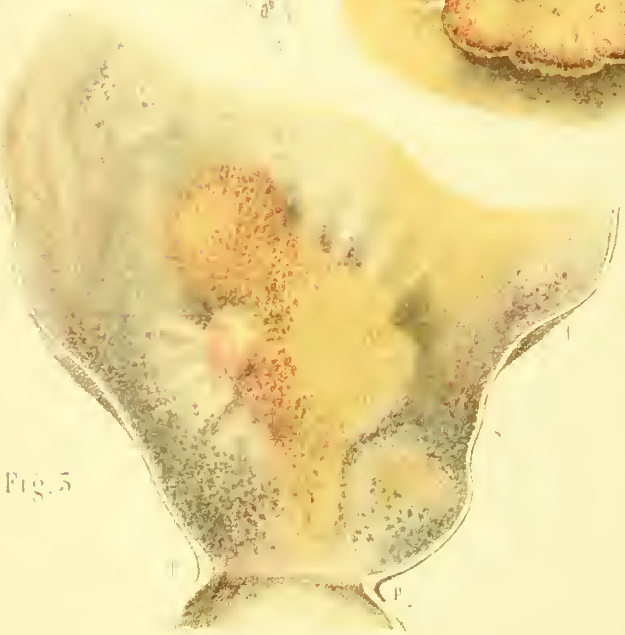

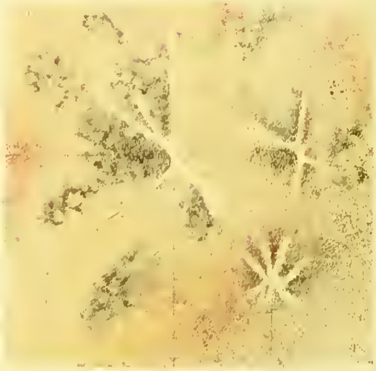

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PLATE II.

Fig. 1.—Alcoholic Gastritis with Superficial Ulcers (one-third nat. size). Stomach opened along its greater curvature; *c*, cardia; *p*, pylorus; *u u*, linear ulcers; *i*, patches of injection; *v v*, varicose vessels. The surface of the mucous membrane is of greyish colour with a slaty tint.

Fig. 1′.—One of the ulcers seen in Fig. 1, viewed under a magnifying power of 20 diam. The glands, which are destroyed in the ulcer itself, are seen in the mucous membrane around it; *s s*, granules of hæmatine of various dimensions; *g g*, clusters of fat granules.

Fig. 2.—Ulcerative Gastritis of Alcoholic Origin healed, showing Cicatrices (nat. size). Portion of the surface of the mucous membrane of the stomach in the neighbourhood of the pylorus; *c c*, white fibrous cicatrices of stellate form; *p*, pigmented patches.

Fig. 3.—Alcoholic Gastritis with a Deep Ulcer (half nat. size). Pyloric region of the stomach; *p*, pylorus: *u*, elongated ulcer, slightly prominent; *s*, pigmentation of the mucous membrane, especially of the glands; *t*, thickened wall.

Fig. 3′.—Vertical section of the wall of the stomach in the situation of the preceding ulcer (nat. size); *n*, ulcerated surface; *m*, hypertrophied muscular fasciculi; *c*, bundle of fibrous tissue between them.

Fig. 4.—Papillary Epithelioma of the Stomach (half nat. size). A portion of the mucous membrane of the stomach, seen on its inner surface, upon which is seated a rounded fungoid outgrowth, slightly depressed in the centre; *c*, section at the edge of this tumour, to show its attachment to the mucous membrane by a sort of pedicle.

Fig. 4′.—Cluster of papillæ (magnified 20 diam., in the recent state) from the margin of the preceding tumour. The papillæ contain varicose vessels.

Fig. 4″.—Tip of one of the above papillæ, magnified 120 diam.

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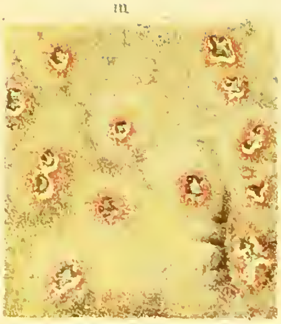

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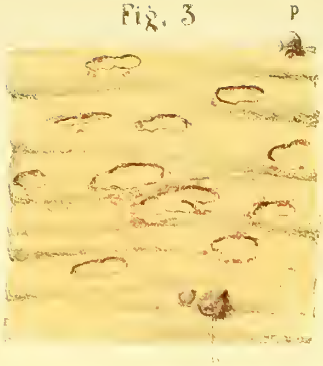

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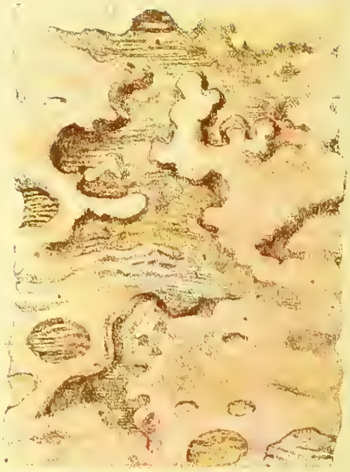

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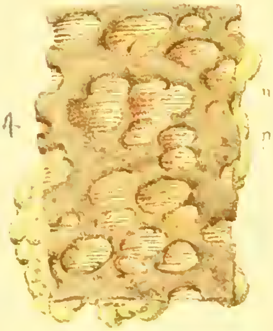

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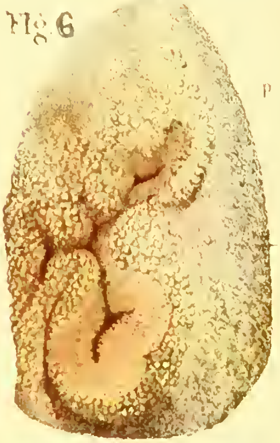

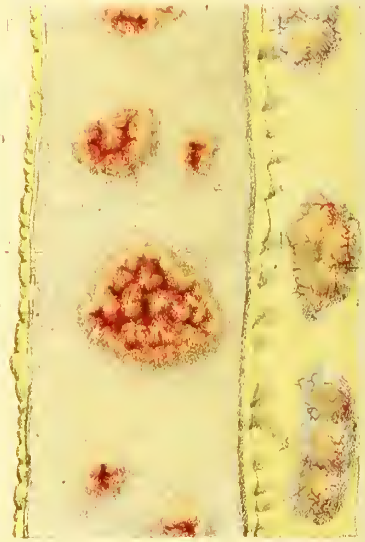

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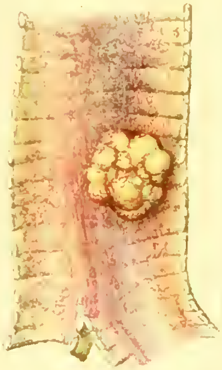

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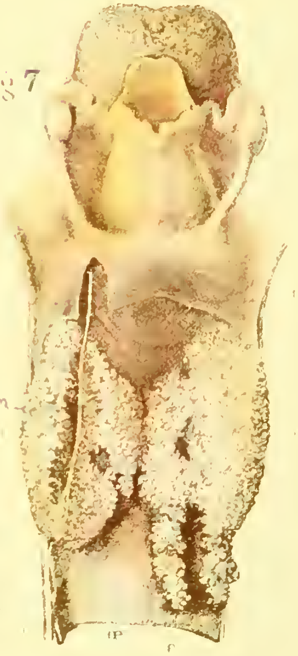

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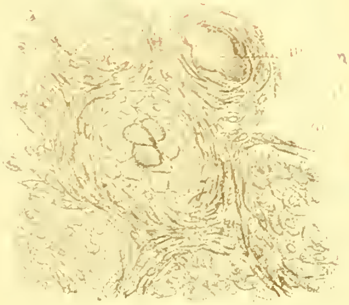

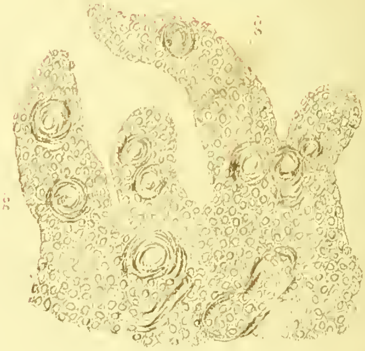

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PLATE III.

Fig. 1.—Typhoid Enteritis (half nat. size). A portion of the small intestine an inch or two above the ileo-cæcal valve; *p*, Peyer's patches swollen and congested and partially ulcerated; *f*, solitary follicles similarly affected; *f′*, follicles only slightly swollen; *m*, mesentery; *g g*, swollen lymphatic glands.

Fig. 2.—Enteritis in Acute Dysentery (half nat. size). Internal surface of the large intestine at the sigmoid flexure; *m*, mucous membrane simply swollen; *u*, circular ulcer; *u′*, serpiginous ulcer resulting from the union of circular ulcers; the circular coat of muscular fibres is seen at the bottom of these ulcers.

Fig. 3.—Chronic Dysenteric Enteritis (half nat. size). Part of the inner surface of the mucous membrane of the rectum; *u u*, ulcers of circular or elliptic shape, for the most part seated on the summits of the folds of the mucous membrane; *p p*, polypoid projections due to hypertrophy of papillæ.

Fig. 4.—Ulcerative Enteritis (half nat. size). Portion of the sigmoid flexure of the colon; *m*, surface of the mucous membrane thickened and of greyish colour; *u u*, ulcers due to the destruction of the mucous membrane and submucous tissue. The floor of the ulcers is formed by the muscular coat.

Fig. 5.—Uræmic Enteritis (nat. size). Part of the mucous membrane of the rectum; *m*, mucous membrane, injected and of greenish tint (stained by contents); *u u*, slightly elevated reddish patches, having in the centre a small yellowish slough of more or less irregular shape.

Fig. 6.—Epithelioma of the Tongue (nat. size). Anterior two-thirds of a tongue whose central part is the seat of an ulcer of irregularly fissured form, *f*. The margins of this ulcer are raised and prominent, and thickly covered with hypertrophied papillæ.

Fig. 6′.—Microscopic preparation of the above epithelioma. Epithelial cells affecting a circular arrangement; in the centre of the circles (epithelial globes) mucous degeneration, *m m*, of some of the cells. (Magnified 230 diam.)

Fig. 7.—Epithelioma of the Œsophagus (half nat. size). Upper and anterior part of œsophagus, the inner surface of which presents a mass of granular white growth, prominent and villous, *c c*; *c′*, posterior wall; *n*, recurrent nerve (inferior laryngeal); *n′*, a branch of this nerve which passes through the tumour, and is swollen, of reddish colour, and infiltrated with epithelial cells.

Fig. 7′.—Trachea, *t t*, perforated by the above tumour at *c*.

Fig. 7″.—Microscopic drawing from foregoing tumour (150 diam.). Epithelial cells united into a solid mass, having a papillary arrangement; *g g*, multiple epidermic globes in the midst of this tissue.

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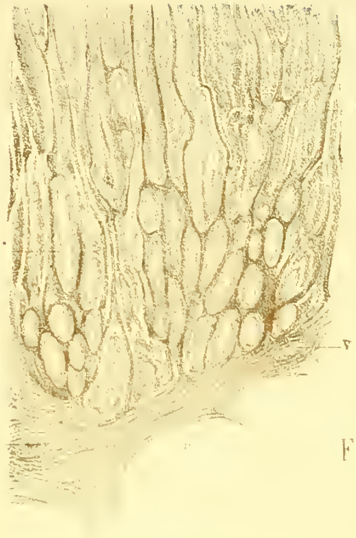

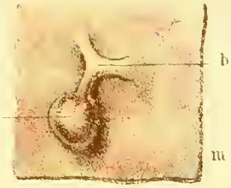

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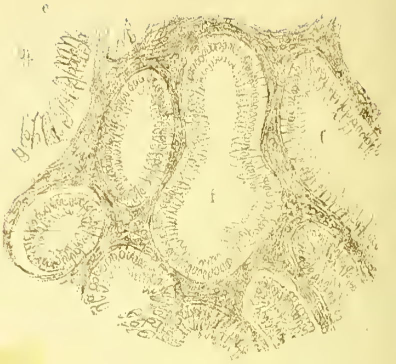

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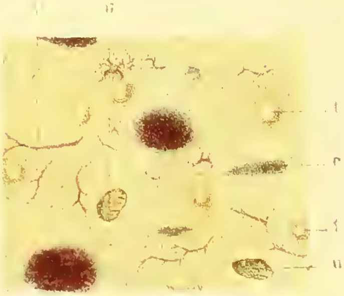

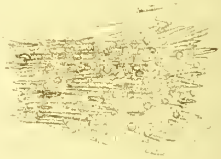

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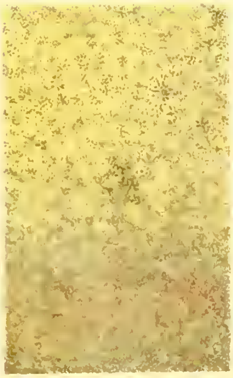

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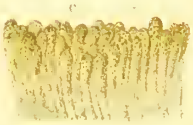

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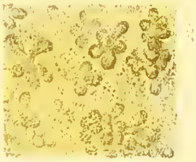

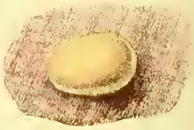

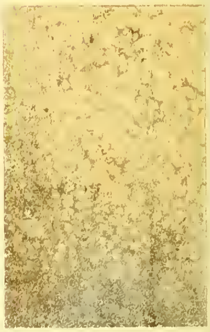

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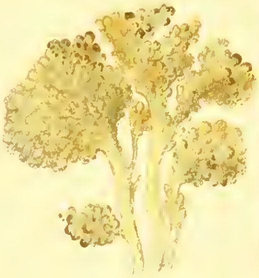

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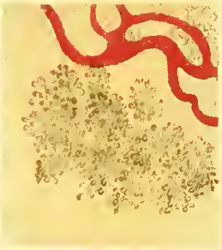

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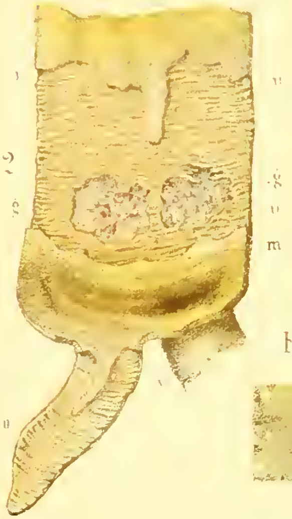

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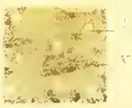

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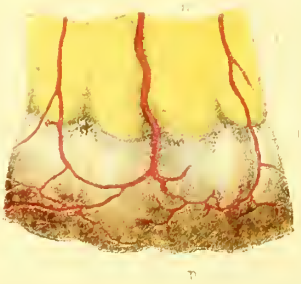

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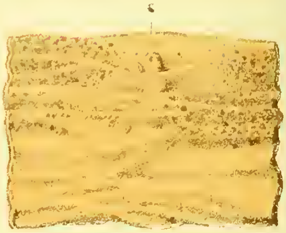

PLATE IV.

Fig. 1.—Disseminated Tuberculosis of Intestine (nat. size). Part of the mucous membrane of the cæcum strewn with miliary tubercular granulations *t t*; *u u*, ulcers in process of cicatrization; *c c*, pigmented cicatrices; *v*, dilated vessel.

Fig. 2.—Circumscribed Tuberculosis of the Cæcum and Appendix Vermiformis (half nat. size). Mucous membrane of the appendix completely destroyed, leaving the muscular coat bare; *u u*, ulcer of the whole circumference of the intestine, involving the entire mucous membrane; *g g*, two patches in a less advanced stage, and strewn with tubercular granulations; *m m*, unaffected mucous membrane; *v*, ileo-cæcal valve.

Fig. 3.—Epithelioma of the Rectum (columnar-celled). Section under the microscope (25 diam.); *c*, supporting fibrous stroma, traversed by vessels, *v v*; higher up, this stroma, less thick, surrounds a large number of cavities, *t t*, which are in the form of more or less elongated tubes.

Fig. 3′.—The same preparation in the upper part, magnified 200 diameters. The alveolar cavities, *f f f*, are lined with columnar epithelial cells, directly implanted on the fibrous network; *c*, free cells.

Fig. 4.—Intestinal Polypus (nat. size). This polypus, *p*, is attached to the mucous membrane, *m*, by the pedicle *b*.

Fig. 5.—Myoma of the Stomach (nat. size). Part of the wall of the stomach viewed from without, where there exists a tumour beneath the peritoneal coat.

Fig. 5′.—Microscopic drawing from the preceding tumour (250 diam.). Round nuclei and muscular fibre-cells, united by amorphous substance; isolated fibre-cells seen at the edges.

Fig. 6.—Hyperæmia of the Stomach following Heart Disease (nat. size). Mucous membrane of the stomach injected and pigmented to some distance from the pylorus.

Fig. 7.—Pigmentation of the Stomach consecutive to Cirrhosis of the Liver (nat. size). The mucous membrane is strewn with spots and numerous points of black colour (middle region of organ).

Fig. 7′ and 7″.—Glands of the stomach (30 diam.). These glands, *g*, which are more especially the seat of the pigmentary change, are infiltrated with blackish granules (hæmatine).

Fig. 8.—Pigmentation of the Large Intestine (external surface) *p*, consecutive to obliteration of the portal vein; *i*, intestine; *m*, mesentery; *v*, vessel.

Fig. 8′.—Internal surface of the same intestine; *f*, follicles; *v*, pigmented points.

Fig. 9.—Pigmentation of the Duodenal Glands (half nat. size). *c*, orifice of the bile duct; *g*, pigmented glands.

Fig. 9′.—The same glands seen from the external surface of the mucous membrane (15 diam.).

Fig. 9″.—Isolated glands; coloured by black and brown pigment (30 diam.).

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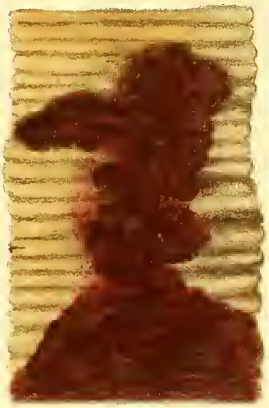

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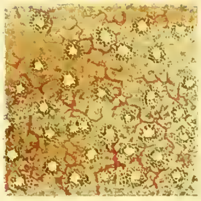

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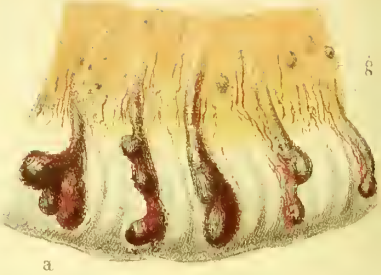

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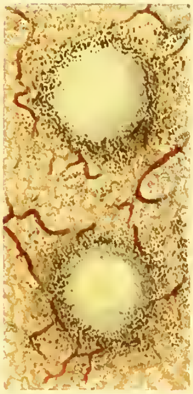

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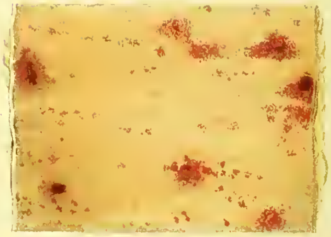

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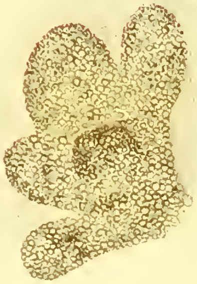

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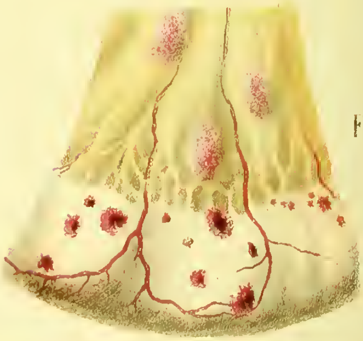

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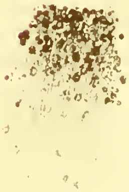

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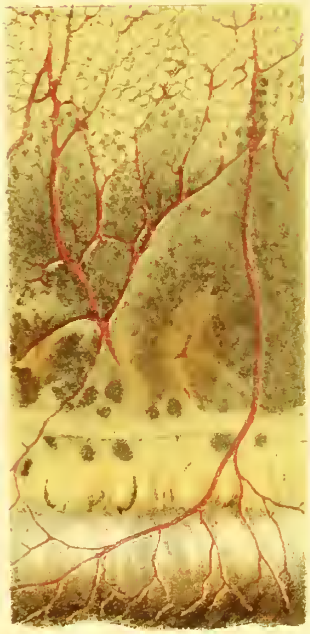

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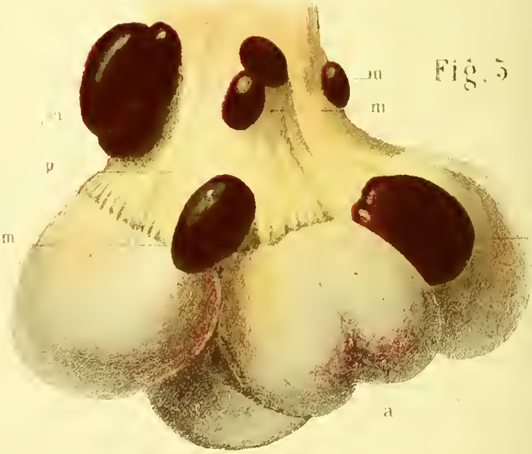

PLATE V.

Fig. 1.—Intestinal Anthracosis (half nat. size). External surface of large intestine, with its appendices epiploicæ, *a*, of blackish colour; *g*, lymphatic glands presenting the same tint.

Fig. 1′.—One of the appendices epiploicæ, showing, especially at its more superficial parts, black granules, which are unaffected by the strongest acids and alkalies (40 diam.).

Fig. 1″.—Internal surface of the large intestine (nat. size), injected and strewn with black points in the neighbourhood of the solitary follicle, *f*; *v*, vessels.

Fig. 1‴.—Two of these follicles (15 diam.), with black granules at their circumference (carbonaceous dust); *f*, follicle; *v*, capillary network.

Fig. 1⁗.—The mesentery, *m*, with part of small intestine, *i*, attached, coloured by black spots of various size and more or less angular (carbon); *g*, lymphatic gland similarly altered; *v*, vessel (half nat. size).

Fig. 2.—Embolic Infarction of Large Intestine (half nat. size). Inner surface of a portion of the colon, with a patch, *h*, of brownish colour, and somewhat raised, forming the infarct.

Fig. 3.—Scarlatinal Hæmorrhages in the Intestines (half nat. size). External surface of a part of the small intestine, strewn with spots of hæmorrhage beneath the serous membrane. In the corresponding part of the mesentery are three swollen lymphatic glands (scarlatinal buboes).

Fig. 4.—From the same patient. Inner surface of a portion of the colon strewn with spots of hæmorrhage, situated either at the surface or in the substance of the mucous membrane.

Fig. 5.—Melanotic Carcinoma (? Sarcoma) of the Peritoneum (half nat. size). Portion of the mesentery, *p*, and of the intestine, *a*, loaded with black masses, *m m*.

Fig. 5′.—Fusiform cells, the nuclei of which especially are infiltrated with black pigment granules; free nuclei and granules.

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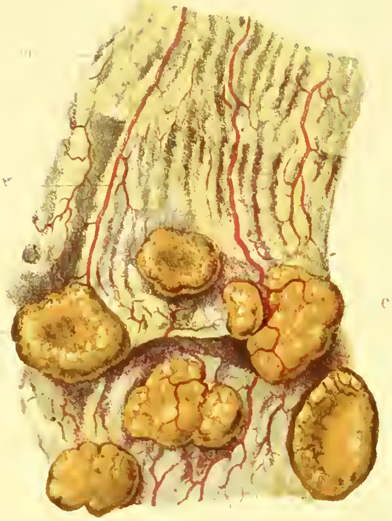
Fig. 2



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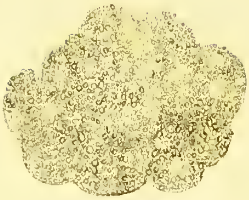

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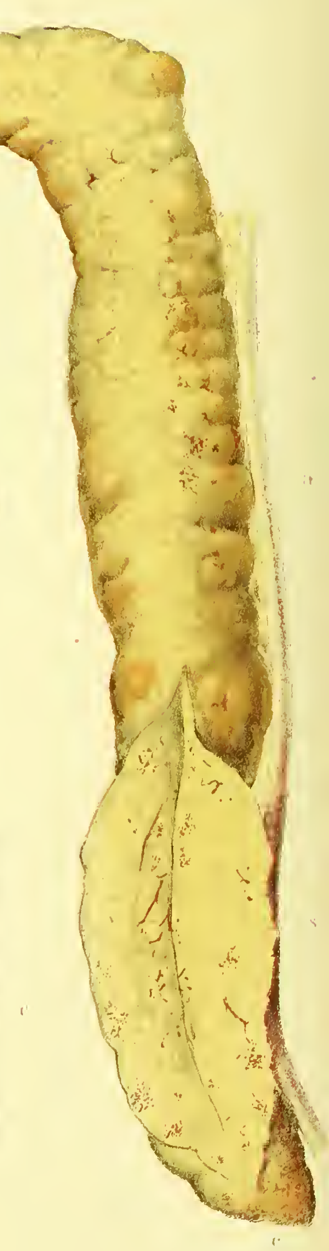

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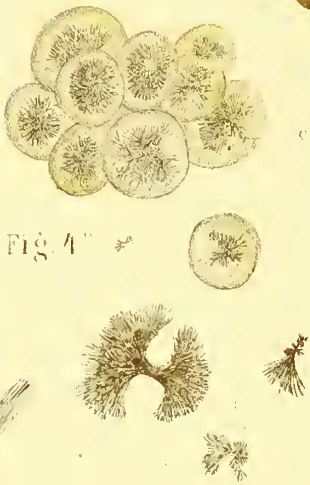

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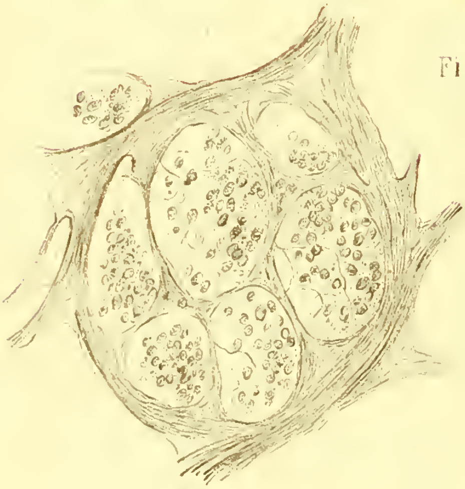

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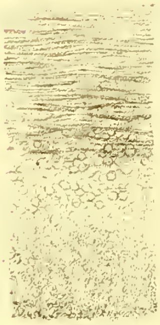

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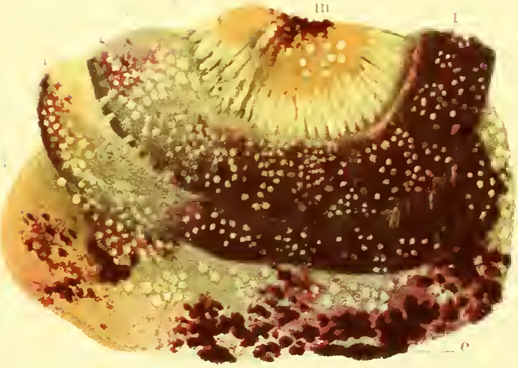


PLATE VI.

Fig. 1.—Tubercular Peritonitis (half nat. size). Portion of mesentery, *m*, and two loops of intestine, *i i*, firmly united to each other and to the peritoneum by false membranes, *f*; *t t*, miliary tubercular granulations scattered over these parts in the serous layer; *c*, spots of hæmorrhagic staining.

Fig. 1′.—A perpendicular section of one of the above granulations (250 diam.); fibrous network, nuclei and small spherical cells composing the granulation. These elements, which are at first contained in fusiform spaces, are later agglomerated as at *e*; towards the centre, *p*, they are granular.

Fig. 2.—Colloid Cancer of the Peritoneum (half nat. size). Part of the great omentum, *m*, with colloid tumours depressed at their centre, *c c*; *v*, a vessel.

Fig. 2′.—Microscopic section of one of these tumours (250 diam.); *f*, fibrous network forming partitions which circumscribe the alveoli, *a*, in which are enclosed colloid cells, granular or vesicular, free nuclei and molecular granules.

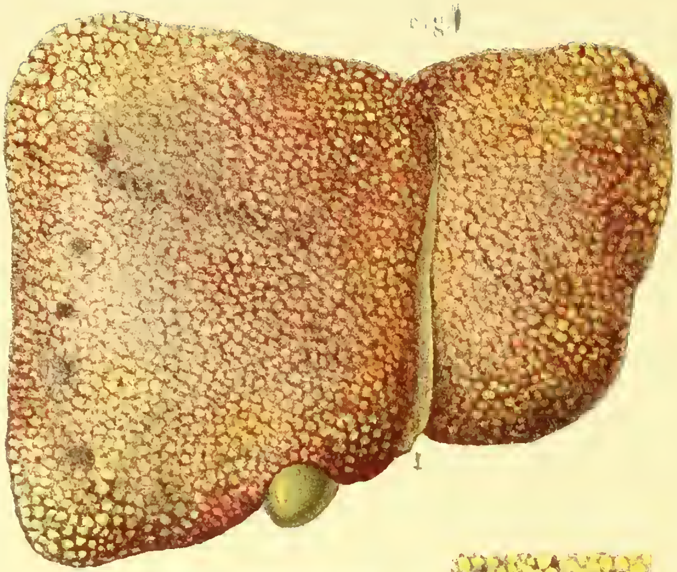
Fig. 3.—Lipoma of the Peritoneum (nat. size). This tumour was found free in the cavity of the pelvis (probably formed by one of appendices epiploicæ, and detached).

Fig. 4.—Fatty Degeneration of the Pancreas (half nat. size). A section has been made through the organ near its lesser extremity, to show the yellow colour of its tissue, *s*; *d*, head of the pancreas; *a*, pancreatic artery.

Fig. 4′.—Culs-de-sac of one of the acini of the gland, containing abundant fatty granules. Some of the epithelium appeared to be entirely destroyed.

Fig. 4″.—Fatty Infiltration of the Pancreas. Fat-cells, *c*, showing radiating crystals of margarine in their interior (140 diam.); *c*′, isolated crystals arranged in a fan shape.

Fig 1



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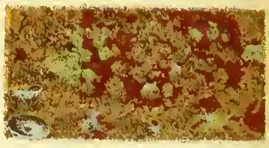

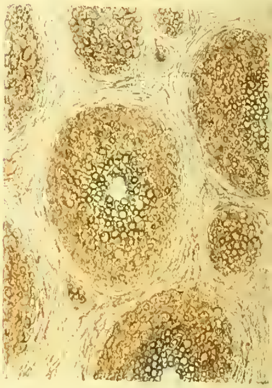

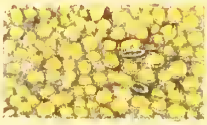

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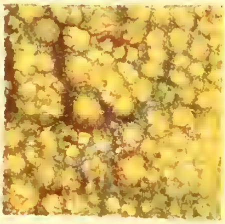

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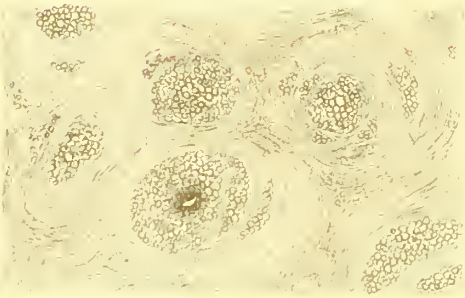

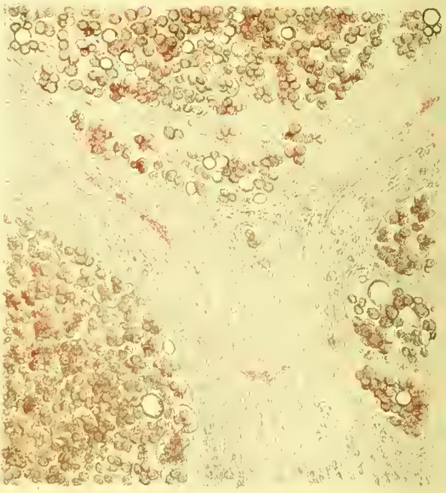

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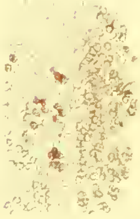

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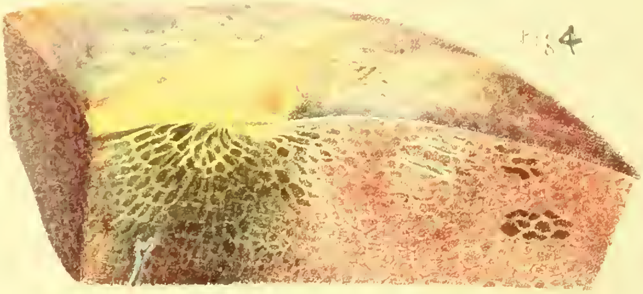

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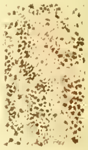

PLATE VII.

Fig. 1.—PROLIFERATIVE ALCOHOLIC HEPATITIS—ALCOHOLIC CIRRHOSIS (one-third nat. size). The entire liver, altered throughout its whole extent, is injected and strewn with small yellowish nodules, which give it a characteristic appearance; V, gall-bladder; *l*, suspensory ligament.

Fig. 1′.—Surface of a section of the same organ (nat. size). Granulations of yellow colour, similar to those on the convex surface, are separated by a greyish connective tissue material; *v*, vessel.

Fig. 1″.—Microscopic section of the same liver (40 diam.) in the fresh state. The lobules are circumscribed by abundant fibrous tissue, containing numerous vessels; *v v*, central lobular veins.

Fig. 1‴.—The same section under magnifying power of 250 diam. Three lobules separated by a very thick and abundant fibrous network, in which are young nuclear and cellular elements. The new cells contain fat and pigment granules.

Fig. 2.—PROLIFERATIVE ALCOHOLIC HEPATITIS (nat. size). ("Hobnail liver.") Part of the liver, the surface of which is irregular and granular. The granulations are circumscribed by connective tissue, greyish and elastic and highly resistant.

Fig. 3.—ADVANCED ALCOHOLIC CIRRHOSIS. Microscopic section of several lobules of the liver (40 diam.). These lobules, compressed by the increase of the fibrous network, are atrophied or almost entirely destroyed. The liver cells contain numerous fat granules. A little more and nothing but a skeleton of the liver would remain. *l*, lobule considerably reduced in size; *p*, one of the portions which the fibrous network has separated from it; *v*, central vein.

Fig. 4.—PROLIFERATIVE HEPATITIS OF PALUDAL ORIGIN.—MALARIAL CIRRHOSIS (nat. size). Piece of the liver, the convex surface and two sectional surfaces of which are drawn. These surfaces are of deep red colour and smooth, but groups of the lobules appear to be separated by a thickening of the connective tissue.

Fig. 4′.—Microscopic drawing (80 diam.) of the circumference of a lobule; *a*, connective tissue network thickened by nuclei and cells of new formation; *b*, pigmented hepatic cells.

Fig. 4″.—Part of the mucous membrane of the small intestine from the same patient, strewn with black points due to pigmentation of the villi and glands.

Fig. 5.—CONGENITAL SYPHILITIC HEPATITIS (nat. size). Part of the liver, firm, indurated, strewn with grey spots and miliary granulations.

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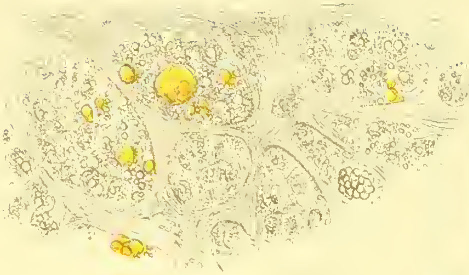

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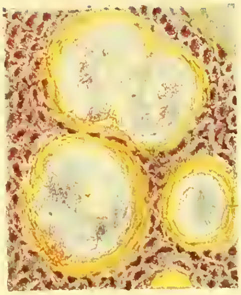

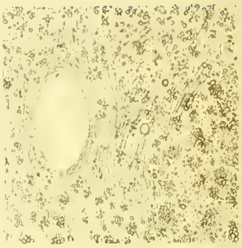

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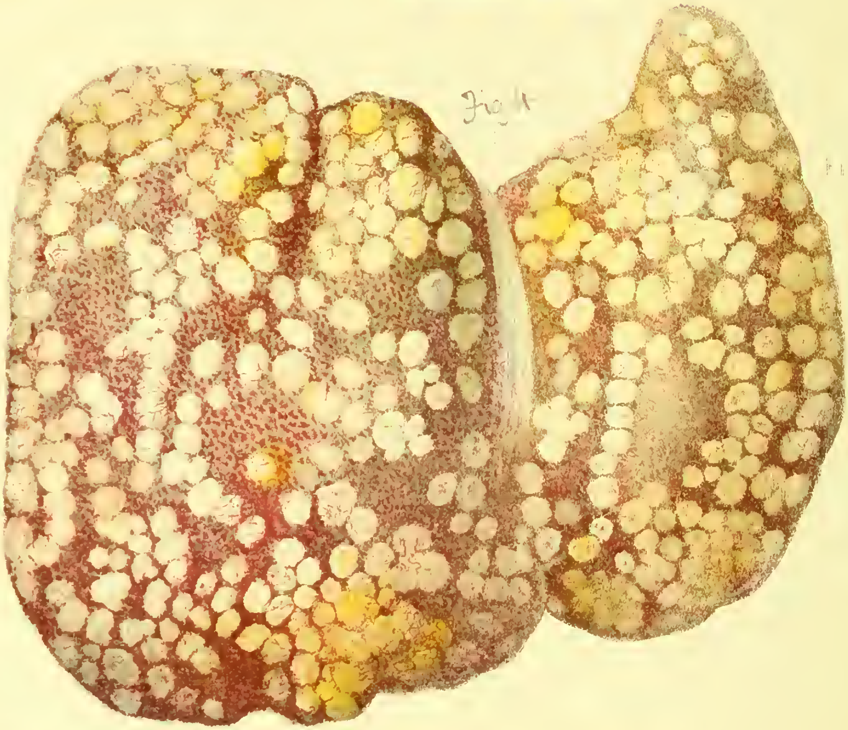

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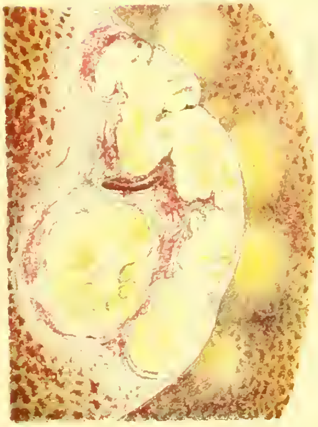

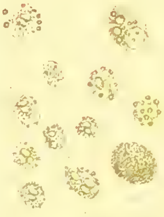

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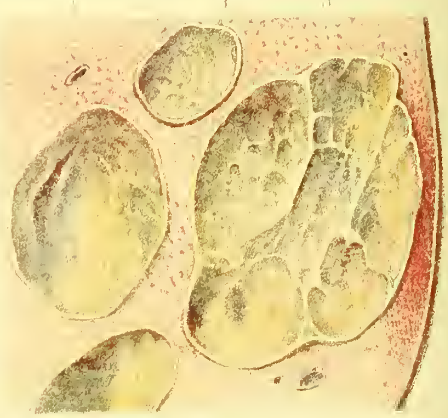

PLATE VIII.

Fig. 1.—Gummatous Syphilitic Hepatitis (half nat. size). Part of liver of which the convex surface, *d*, and a sectional surface, *s*, are drawn; *g g*, gummata projecting on the free surface, markedly circumscribed, and separated by a vascular fibrous sheath, which forms a sort of zone around them.

Fig. 2.—Suppurative Hepatitis (half nat. size). Surface of a section of part of the liver containing abscesses; *a a*, purulent cavities, limited by fibrous tissue of greyish or reddish tint. The interior of these cavities is uneven and pitted. The liver tissue in their neighbourhood is soft, yellowish and injected; *v*, a vessel.

Fig. 2′.—Pus corpuscles and liver cells from the above abscess.

Fig. 3.—Acute Yellow Atrophy of the Liver. Exudative Hepatitis. Section of a lobule of the liver, near the central vein; molecular and pigmentary granules due to the destruction of the liver cells.

Fig. 4.—Primary Cancer of the Liver (one-third nat. size). The entire organ is strewn with chestnut-like masses, which are depressed and yellowish white in the centre, and rosy or reddish at the circumference. The parenchyma of the liver between the masses is everywhere more injected and softer than normal. The liver cells contain fat granules.

Fig. 4′.—Surface of a section of the same organ (nat. size). *m*, cancerous masses; *t*, hepatic tissue.

Fig. 4″.—Microscopical section of one of the tumours; *f*, fibrous network forming alveoli, which contain large oval or spherical cells with a nucleus of large size.

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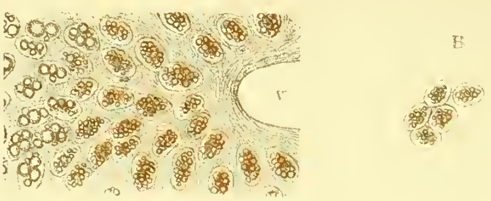

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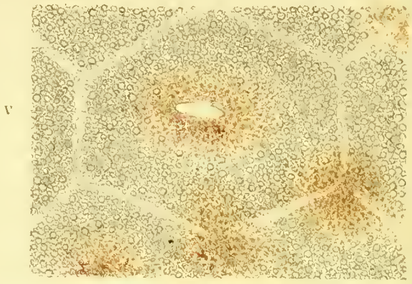

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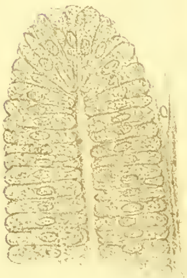

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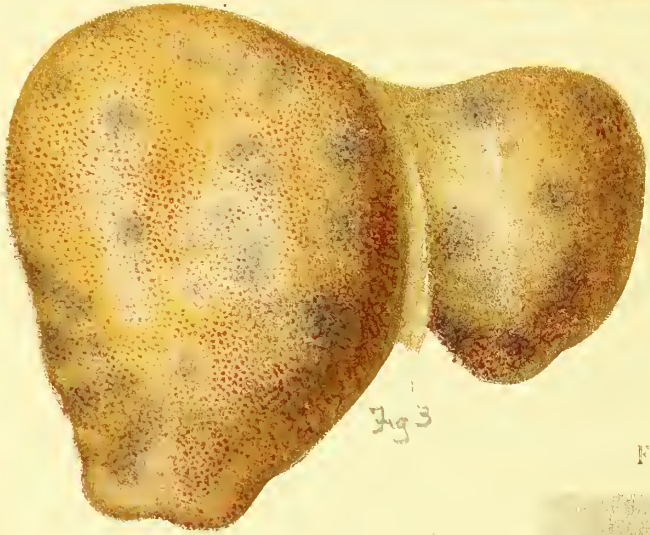

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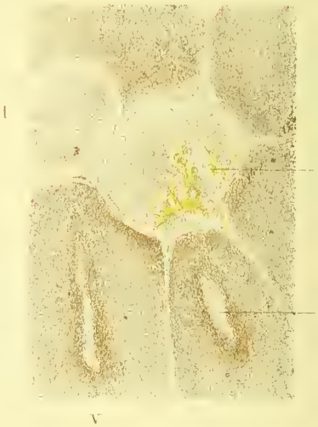

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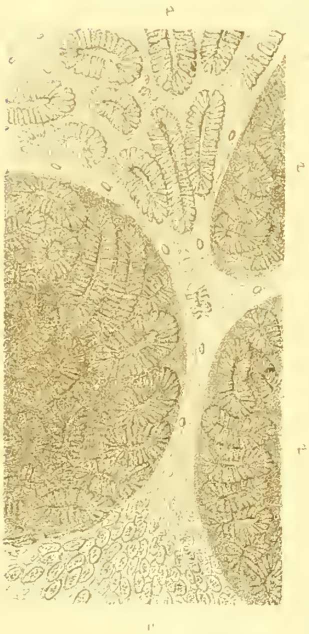

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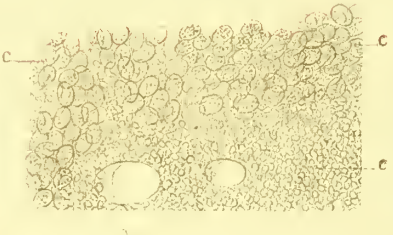

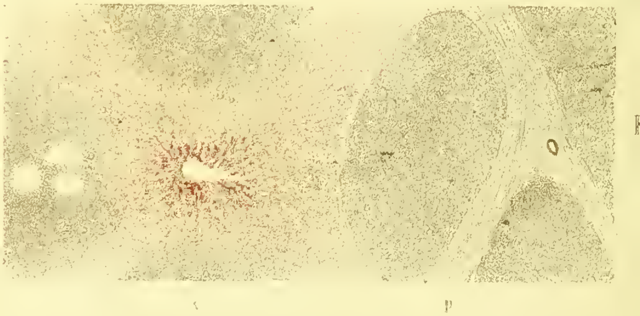

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PLATE IX.

Fig. 1.—Tuberculosis of the Liver. Microscopic section of a liver containing scattered miliary granulations (magnified 25 diam.); *t t*, two granulations developed in the interstitial connective tissue; *v v*, intralobular veins.

Fig. 1′.—From the same section (magnified 140 diam.). *c c*, granular liver cells; *e*, nuclei and small round cells composing the tubercular granulation; *v v*, vessels.

Fig. 2.—Secondary Cylindrical Epithelioma of the Liver. Section seen under microscope (40 diam.); *v*, intralobular vein; *p*, thickened fibrous network at the periphery of the lobule; the grey points are invaded by the epithelioma, the central rosy part is composed of hepatic tissue.

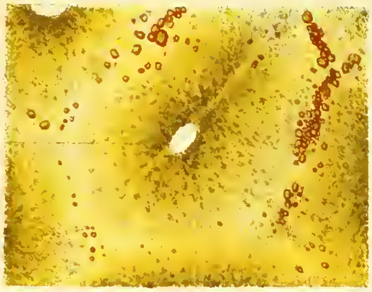
Fig. 2′.—The same preparation (180 diam.). *c*, liver cells compressed and flattened by epithelial masses in their neighbourhood; *e c*, these masses composed of tubes analogous to gland tubes, but with the difference that the epithelial cells are here directly inserted upon the connective tissue network.

Fig. 2″.—One of the same tubes (400 diam.).

Fig. 3.—Melanotic Cancer (*i.e.*, Sarcoma) of the Liver (one-third nat. size). The entire liver strewn with slate-coloured patches, scarcely projecting on the surface, which are small melanotic tumours; *l*, suspensory ligament.

Fig. 3′.—Section of one of the lobules of the above liver, to show the parts invaded by the melanosis (25 diam.). *v*, intralobular vein.

Fig. 3″.—A, portion of the same lobule magnified 260 diam.; *v*, central vein with cells filled with pigment granules in its neighbourhood; further from it the cells are filled with fat granules. B, isolated cells with pigment granules.



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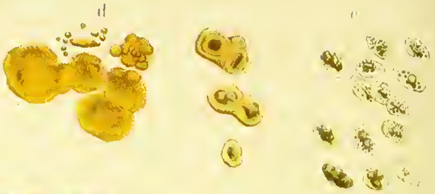

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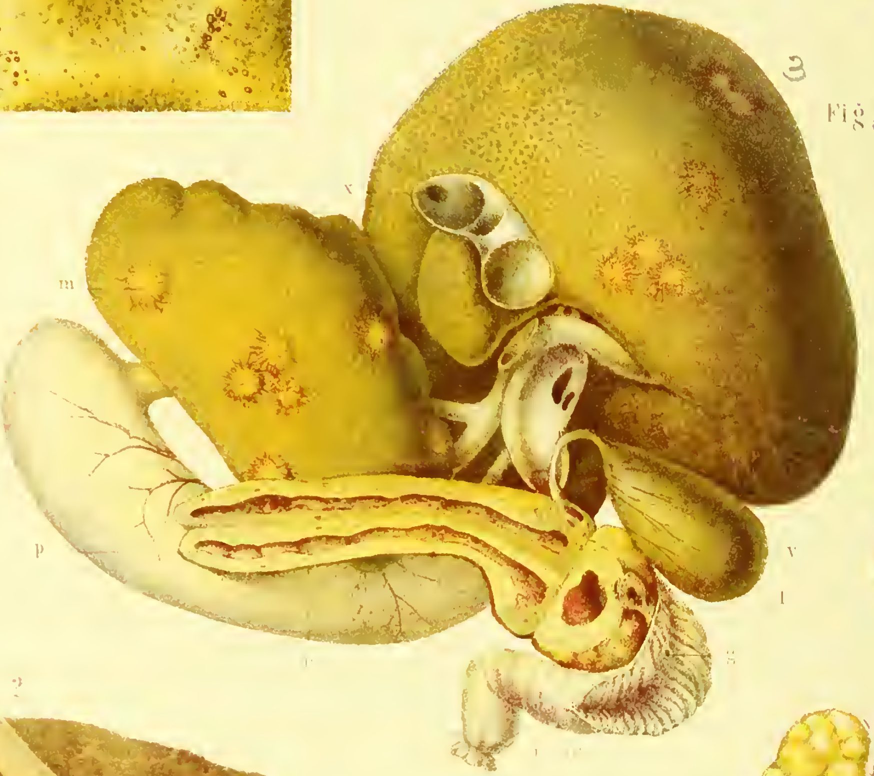

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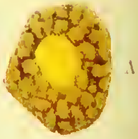

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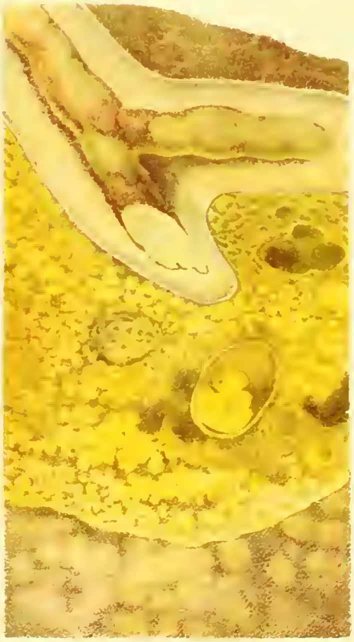

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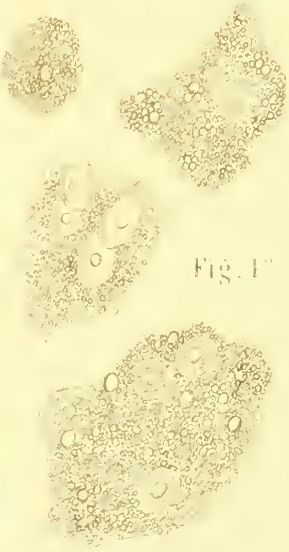

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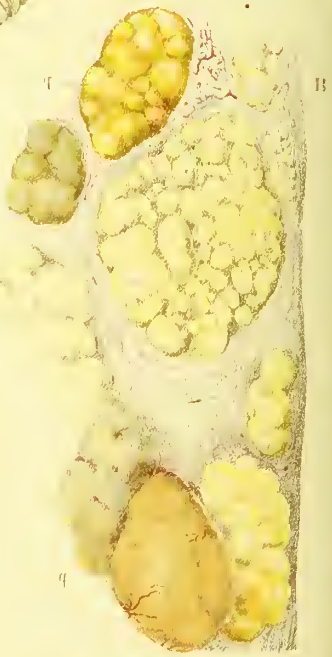

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PLATE X.

Fig. 1.—Adenoma of the Liver (nat. size). A, portion of the surface of the liver; B, section of the organ perpendicular to its convex surface; *q q*, nodular masses circumscribed by the thickened fibrous network, and composed of hypertrophied liver cells.

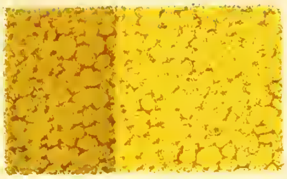
Fig. 1′.—Hypertrophied liver cells from the above liver (450 diam.).

Fig. 2.—Adenoma of the Liver (three-fourths nat. size). Part of the convex surface *s*, and sectional surface of the liver to the right of the Spigelian lobe; the surface is strewn with small nodular tumours *o*; *h h*, branches of the hepatic veins partially obstructed; *c*, a clot filling nearly the whole calibre of the portal vein, and composed, as are also the clots in the hepatic veins, of liver cells, fibrine and fibroid tissue.

Fig. 3.—Changes in the Liver consecutive to Obstruction of the Bile-Ducts by Cancer of the Head of the Pancreas (one-third nat. size). *b*, gall-bladder; *p*, pancreas; *e*, stomach; *i*, intestine; *g*, orifice of pancreatic and bile ducts (ampulla of Vater); *c c*, pancreatic duct, dilated and with indurated walls; *l*, common bile-duct; *a*, hepatic artery; *x*, vena cava; *y*, vena portæ; *m*, cancerous masses scattered through the liver.

Fig. 3′.—Microscopic section of the same liver (30 diam.). *v*, intra-lobular vein; *d*, masses of red colouring matter deposited at the periphery of the lobules along the course of the portal canals. Infiltration of green colouring matter at the centre of the lobule.

Fig. 3″.—*d*, orange-coloured pigment and small calculi (140 diam.); *c*, liver cells containing abundant greenish pigment.



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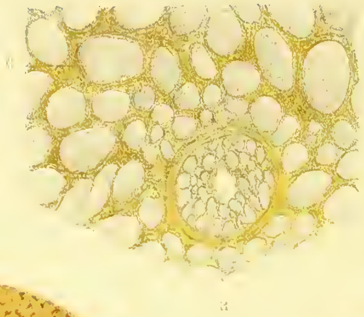

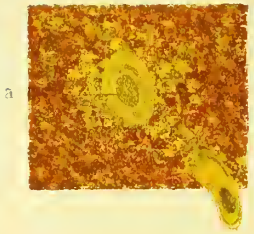

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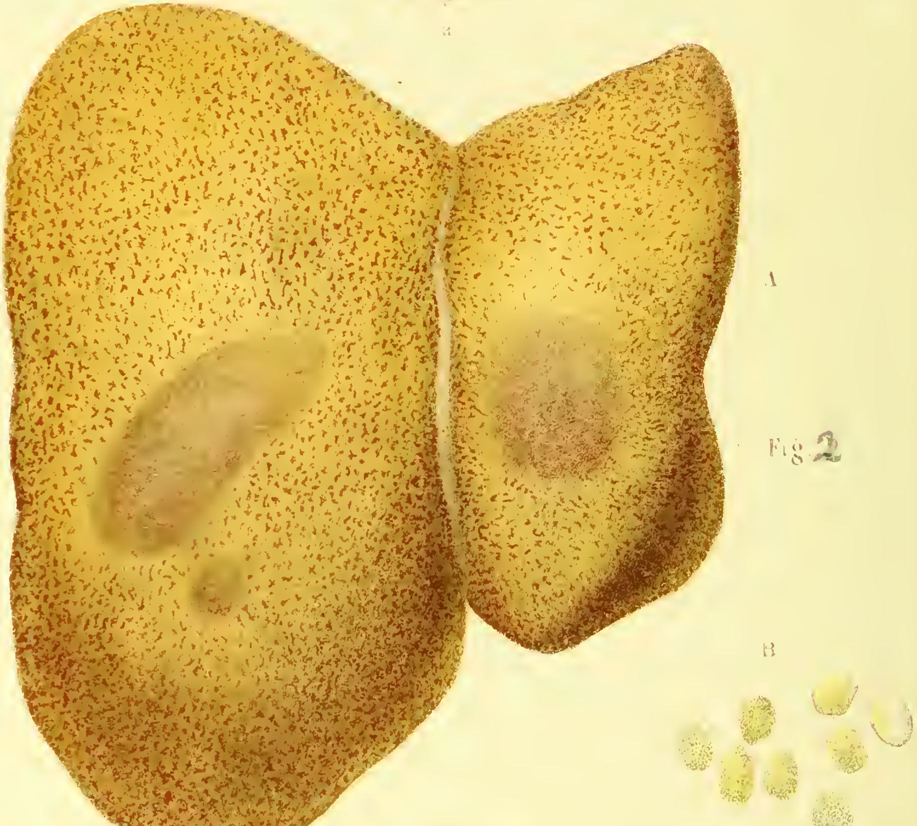

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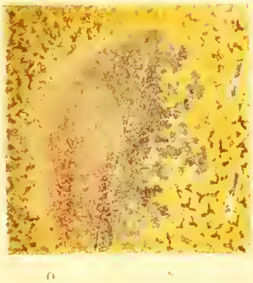

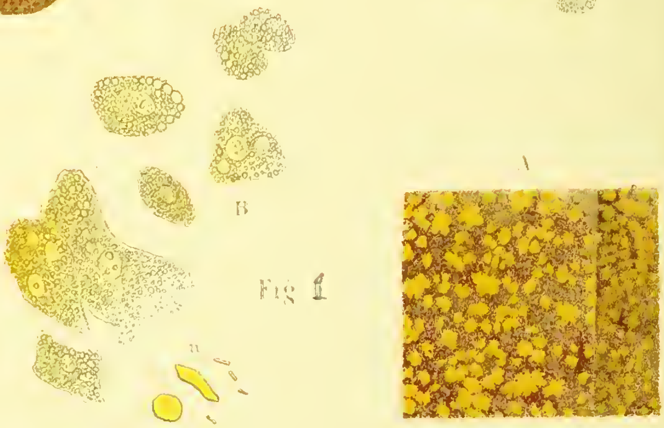

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PLATE XI.

Fig. 1.—Adenoma of the Liver. A, part of liver, showing convex and sectional surfaces, injected and strewn with small yellowish nodules (nat. size). B, hypertrophied cells composing these nodules; *n*, crystals of biliary colouring matter (450 diam.).

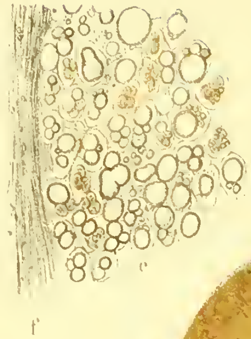
Fig. 2.—Lardaceous Degeneration of the Liver (one-third nat. size). A, the entire liver, of dirty ochrey yellow colour, spotted with red, with two large spots of purplish colour, is increased in size, especially in its vertical diameter, which distinguishes it, as regards form, from the fatty liver of drinkers; B, isolated liver cells, infiltrated with lardaceous (or "amyloid") substance.

Fig. 2′.—Part of the above liver (one-half nat. size). *s*, convex surface; *o*, surface of section which passes through one of the dark reddish patches.

Fig. 2″.—Microscopic section of the same liver at the position of one of these spots (350 diam.); *a*, wall of artery, in the substance of which the greyish, translucent, so-called amyloid, substance forms distinct small masses; *c*, liver cells infiltrated with the same substance, and more or less voluminous.

Fig. 3.—Lardaceous ("Amyloid") Degeneration of the Liver (nat. size). Convex and sectional surfaces. The liver tissue is strewn with small greyish points, resembling grains of sago.

Fig. 3′.—Microscopic section of the same liver (60 diam.), stained by aqueous solution of iodine; *a*, artery, with thickened and degenerated walls.



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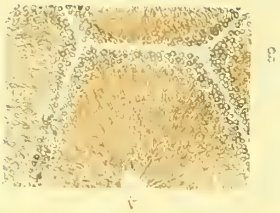

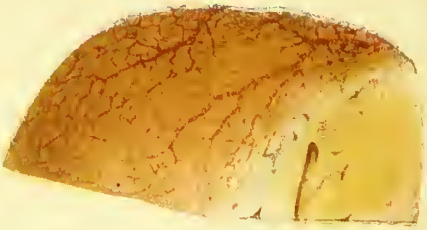

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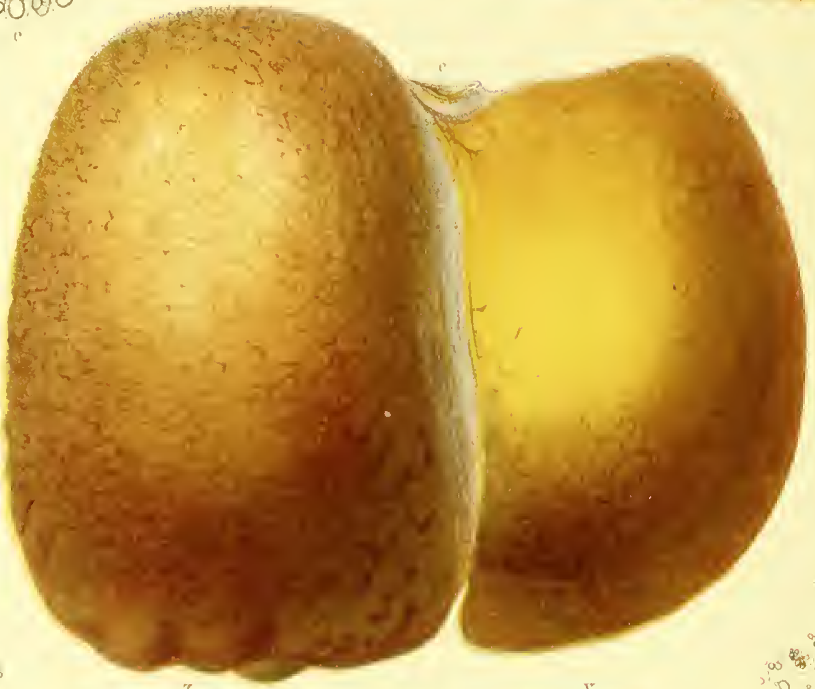

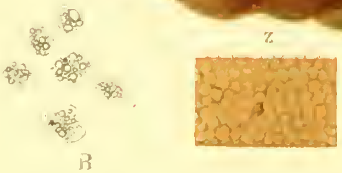

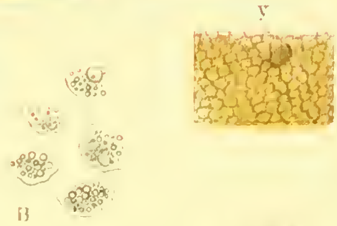

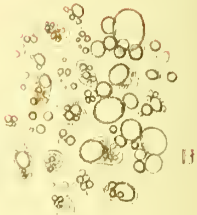

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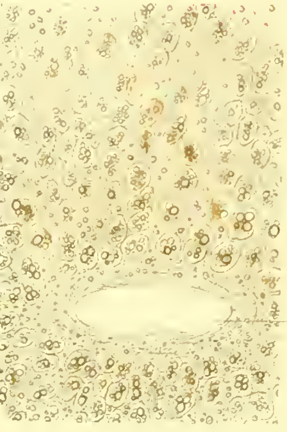

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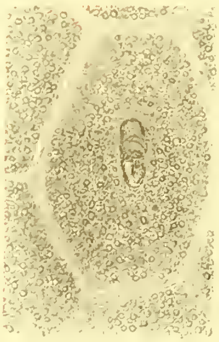

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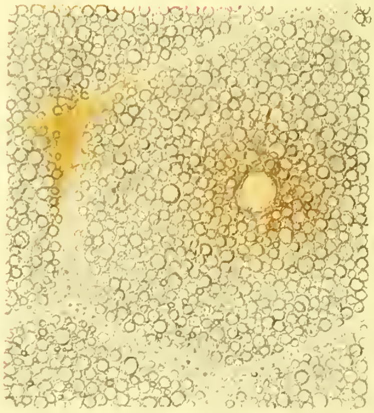

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PLATE XII.

Fig. 1.—Fatty Liver in Pregnancy. A, microscopic section of one of the lobules of liver (350 diam.); *v*, intralobular vein; *c*, cells with fat granules, which are more abundant than in the normal state; B, isolated cells (350 diam.).

Fig. 2.—Fatty Liver in a case of Scarlet Fever (25 diam.). *v*, intralobular vein; *g*, fatty accumulation at the periphery of the lobules. The liver cells are here infiltrated with fat granules.

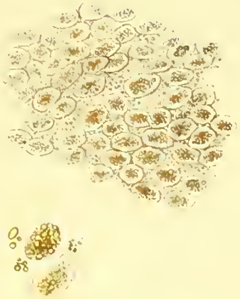
Fig. 3.—Fatty Degeneration of the Liver produced by Phosphorus. Part of the convex and sectional surfaces of the liver of a patient who died from poisoning by lucifer matches. The organ, which was of nearly normal consistence, presented a dirty yellowish tint.

Fig. 3.′—A, Microscopic section of the same liver (30 diam.). The change occupies the whole thickness of the lobules. B, cells from a liver less changed, and infiltrated with fine fat granules (400 diam.).

Fig. 4.—Alcoholic Fatty Degeneration of the Liver (one-third nat. size). The entire liver of a deep yellow colour, more pronounced in the left lobe; the organ, which is slightly lobulated and uneven on its convex surface, is of great thickness, so that it is almost cubic in apparent shape; *c*, vena cava; *y*, surface of section of right lobe (nat. size); *z*, surface of section of left lobe (nat. size).

Fig. 4′.—Microscopic section (200 diam.) seen at the periphery of a lobule; *f*, thickened fibrous network; *c*, liver cells containing granules and drops of fat.

Fig. 5.—Fatty Degeneration of the Liver in a Drinker affected with Malarial Poisoning. A, microscopic section of a lobule of the liver (50 diam.). Large fat drops are seen even with this low power. B, cells from the same lobule containing large drops of fat. Free granules are also seen (magnified 200 diam.).



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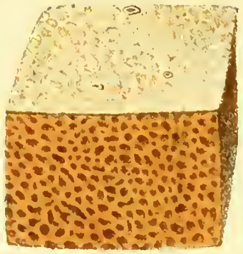

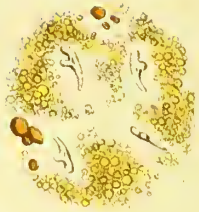

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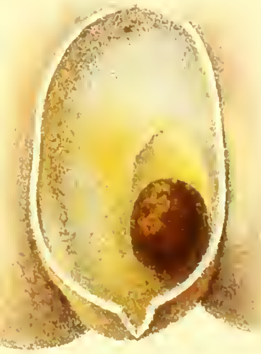

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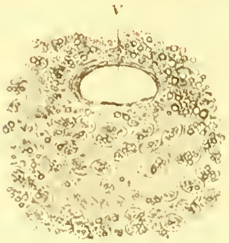

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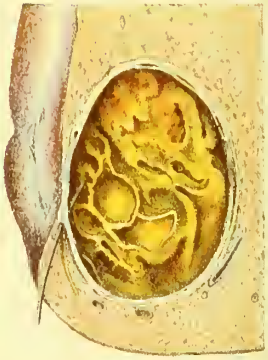

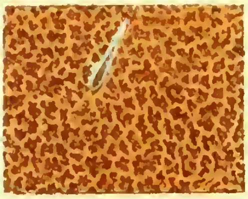

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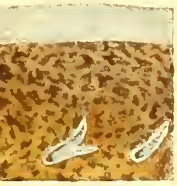

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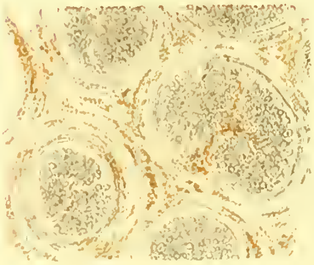

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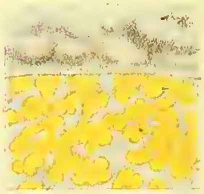

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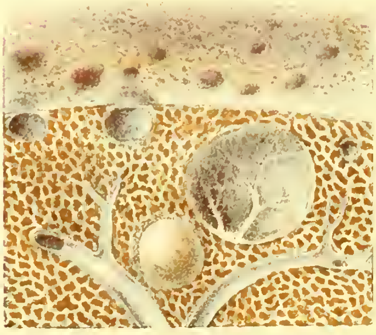

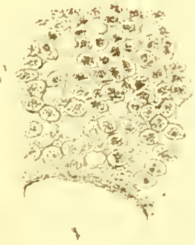

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PLATE XIII.

Fig. 1.—Congestive Hyperæmia of the Liver, from Stasis (nat. size). Part of surface of section of the liver of a patient with dilated right heart. The organ is firm, indurated, strewn with dark purplish red or brown spots circumscribed by yellower parts, which have obtained for it the name of "nutmeg liver."

Fig. 1′.—Microscopic section of a lobule of the same liver (140 diam.); *v*, dilated intralobular vein, with thickened walls. The liver cells in the neighbourhood small, atrophied, and filled with molecular or fatty granules; the connective tissue is somewhat thickened.

Fig. 2.—Brown Pigmentation of the Liver, Hepatic Melanæmia (nat. size). Part of the liver spotted with yellow and brown, slightly granular, firm, and a little indurated.

Fig. 2′.—Liver cells from the same organ, filled with fat granules (140 diam.); the isolated cells are magnified 250 diameters.

Fig. 3.—Black Pigmentation of the Liver, Hepatic Melanæmia (nat. size). Portion of the liver, of which the parenchyma is greyish, and strewn with more or less irregular black spots.

Fig. 3′.—Microscopic drawing of the same in the neighbourhood of the intralobular vein, *v*. The liver cells are infiltrated with pigment granules (140 diam.).

Fig. 4.—Black and Yellow Pigmentation of the Liver in Melanæmia (nat. size). Part of the liver, indurated, greyish, with multiple yellow spots.

Fig. 5.—Pigmentation of the Liver, occupying simply the Connective Tissue (20 diam.). The pigment granules are disseminated in fusiform spaces.

Fig. 5′.—The same pigment enclosed in plasmatic cells (200 diam.).

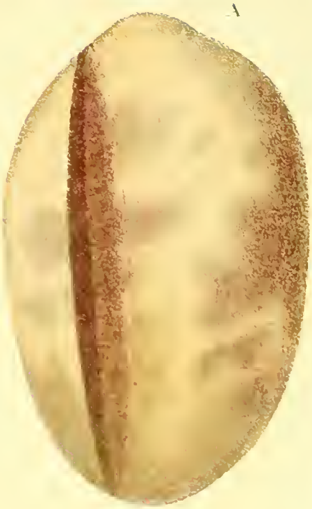
Fig 6.—Multiple Serous Cysts of the Liver (nat. size). These cysts, the size of a pea or a cherry, are for the most part situated at the periphery of the organ, in the substance of an erectile tumour. Probably this tumour has been their starting-point.

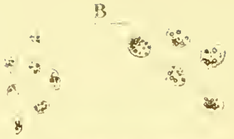
Fig. 7.—Hydatid Cyst of Liver in Process of Cure (half nat. size). Part of the liver, with a sort of fibrous cicatrix on its surface, and more deeply a cyst the size of an egg, filled with yellowish membranous material. The contents are coloured with bile, which is poured out by a small bile duct which opens into the cavity of the cyst.

Fig. 7′.—Echinococcus hooklets, fat granules, and small masses of colouring matter from the above cyst (250 diam.).

Fig. 8.—Biliary Calculus. This calculus has caused ulceration of the gall-bladder, and given rise to suppuration of the neighbouring liver parenchyma. Some hypertrophied papillæ are seen on the inner surface of the gall-bladder (half nat. size).

Fig. 3





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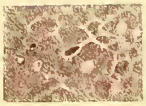

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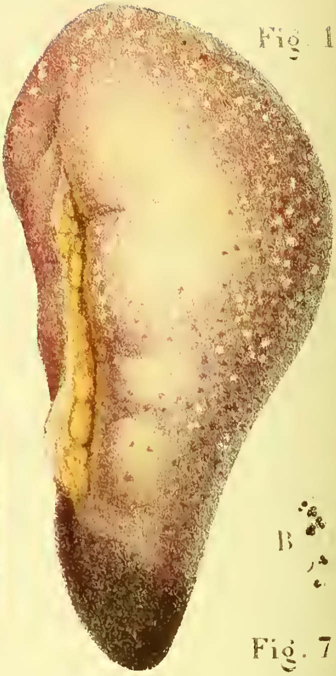

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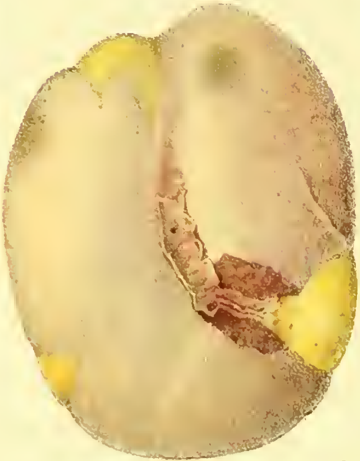

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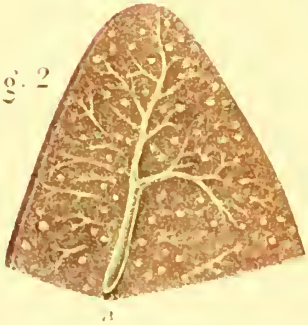

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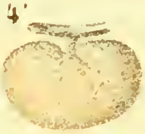

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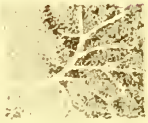

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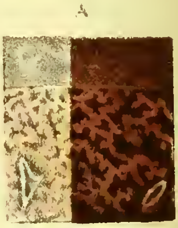

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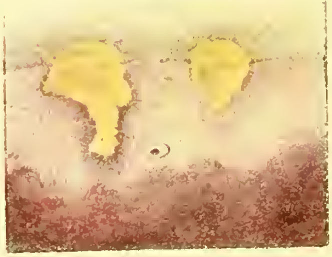

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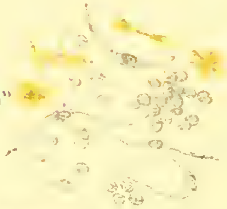

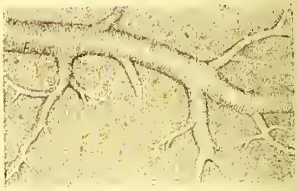

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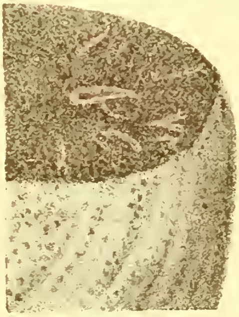

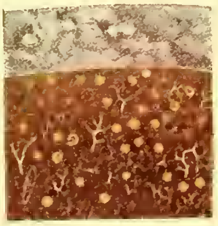

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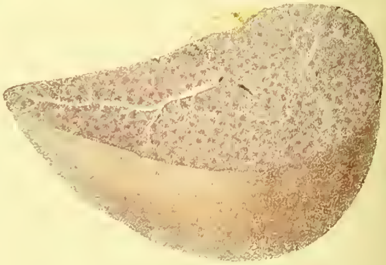

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Préparations par Lancereaux

Dessin et lith en coul. par Lackerbauer

Imp. Becquet Paris

PLATE XIV.

Fig. 1.—LEUKÆMIC SPLENADENOMA (half nat. size). The entire spleen, increased in volume, is strewn with hæmorrhagic spots and whitish points, and is pigmented and nearly black at the lower extremity.

Fig. 2.—TUBERCULOSIS OF THE SPLEEN (nat. size). Surface of section of a portion of the spleen, with disseminated miliary tubercular granulations; *a*, arterial branch.

Fig. 3.—MELANOSIS OF THE SPLEEN. A, entire spleen (half nat. size), strewn with black spots, scarcely projecting, formed by deposit of pigment granules in the interior of its cells. B, pigmented cells (150 and 300 diam.).

Fig. 4.—AMYLOID (*i.e.*, LARDACEOUS) DEGENERATION OF THE SPLEEN ("Splenic Leucomatosis") (three-quarters nat. size). Transverse section of the spleen at its upper extremity. An arterial branch is seen on the sectional surface, which is studded with transparent granular greyish points on a violet ground. These greyish points are to the naked eye characteristic of the alteration.

Fig. 4′.—Malpighian body of the same organ affected by the degeneration, and stained with solution of iodine (20 diam.).

Fig. 5.—HYPERTROPHY OF THE SPLENIC GLOMERULI IN A CASE OF SCARLET FEVER (nat. size). Surface of a section of the spleen, in which are seen the hypertrophied Malpighian bodies in the form of miliary grains.

Fig. 6.—SPLEEN IN MELANÆMIA, AND ALTERATION OF THE MALPIGHIAN CORPUSCLES (nat. size). Section and surface of the spleen. The hypertrophied corpuscles stand out in white on the pigmented ground of the splenic parenchyma.

Fig. 7.—SPLENIC MELANÆMIA. *a*, section and surface of a spleen affected by this change (nat. size). The clear part is of the tint which results from washing. *b*, cells of the spleen containing pigment granules (220 diam.).

Fig. 7′.—Microscopic section (34 diam.) showing the arrangement of the pigment in the neighbourhood of the vessels.

Fig. 8.—SPLENIC MELANÆMIA IN A SPIRIT DRINKER (nat. size). Transverse section and surface of a spleen pigmented through its whole thickness. The pigmentation of the surface is in the form of regularly arranged points.

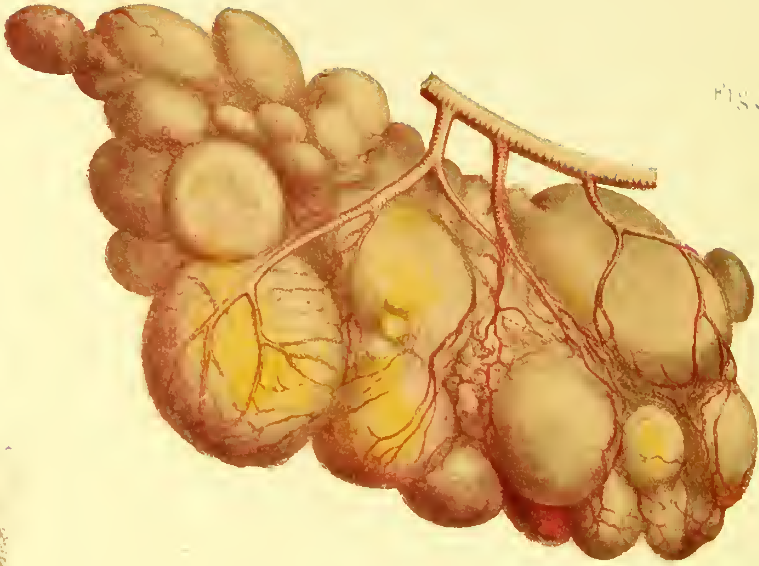
Fig. 9.—WEDGE-SHAPED INFARCTS OF THE SPLEEN (half nat. size). Section and surface of a spleen in which two of these infarcts stand out, of a bright yellow colour.

Fig. 9′.—Microscopic section of one of these infarcts (34 diam.), strewn with crystals of the colouring matter of the blood.

Fig. 9″.—The same crystals and cells of the spleen beginning to degenerate; elongated cells undergoing the same process (250 diam.).

Fig. 10.—SPLENIC EMBOLISM (half nat. size). The entire spleen, one of whose arterial branches is laid open, shows an embolus which is already old and adherent to its wall; the yellow tint represents the corresponding infarct, which occupies the whole circumference of the organ. Higher up is seen a similar infarct. (See also Plate XX., Fig. 3.)

Fig. 3



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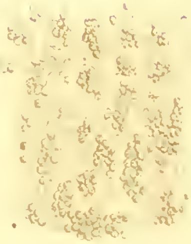

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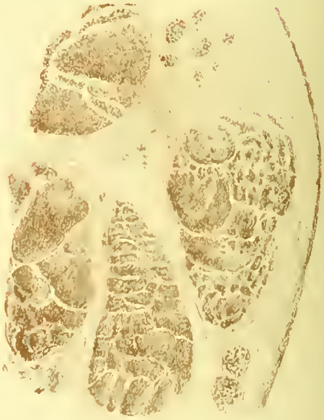

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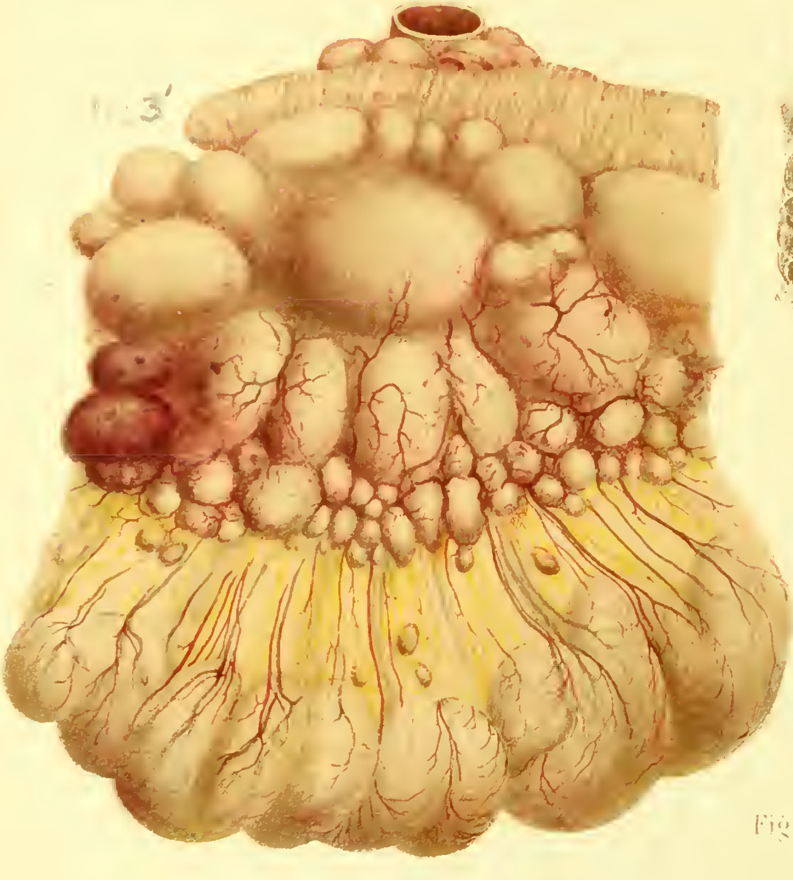


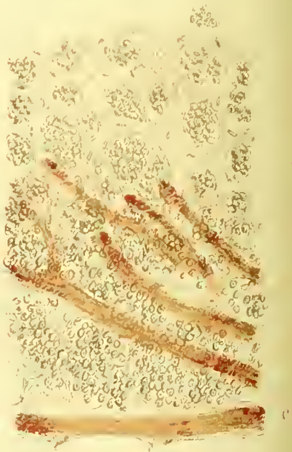


Fig. 5

PLATE XV.

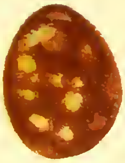
Fig. 1.—Sclerosis of the Glands in a Patient formerly affected with Malarial Poisoning (12 diam.). Large islets of the glandular substance are separated by thick fibrous tracts, which are formed by fibrous tissue, nearly all of which is of new formation.

Fig. 2.—Sclerosis of the Glands in a Drinker who died of Alcoholic Cirrhosis (250 diam.). Fibrous tracts, more numerous and thicker than those in the preceding figure, circumscribe small islets of lymphatic cells.

Fig. 3.—Glandular Leukæmia, Leukæmic Lymphadenoma (half nat. size). Glandular mass from the right axilla. *a*, trunk of the axillary artery, its branches distributed to the rounded voluminous hypertrophied lymphatic glands.

Fig. 3′.—Mass of mesenteric glands from the same patient as in Fig. 3 (half nat. size). *a*, aorta; *p*, pancreas; *g*, hypertrophied lymphatic glands.

Fig. 3″.—Microscopic section of one of the above glands (150 diam.). *c*, vessel and fibrous skeleton of one of the above glands with its alveoli filled with lymph cells. The change consists in a hyperplasia with hypertrophy of the structures of the gland.



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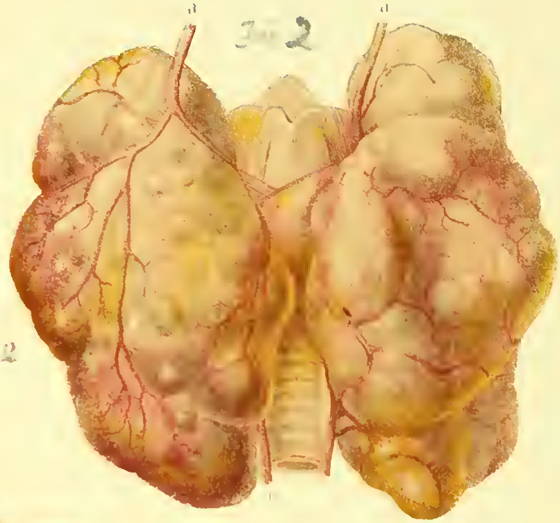

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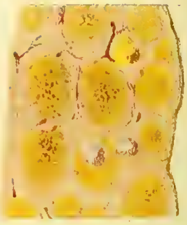

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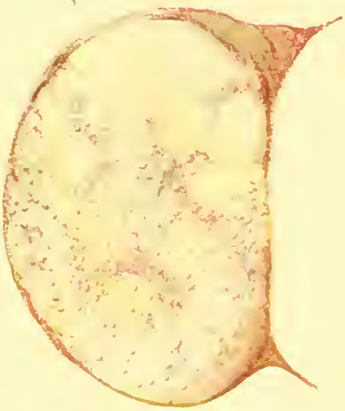

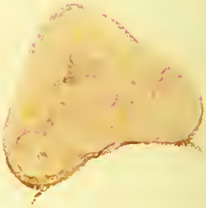

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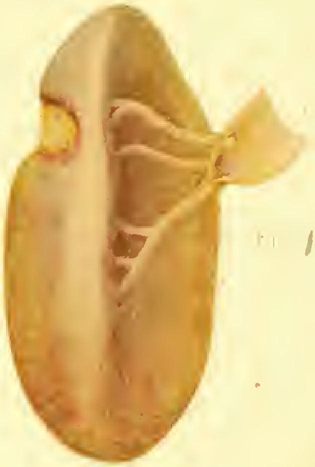

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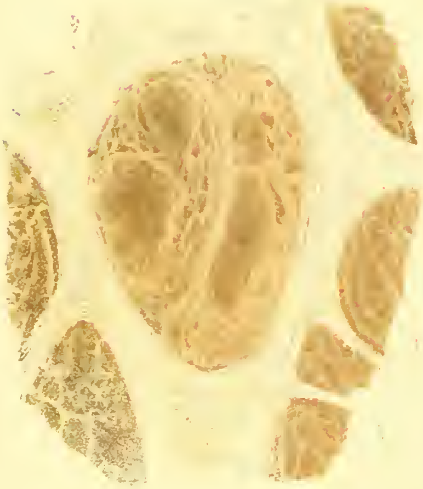

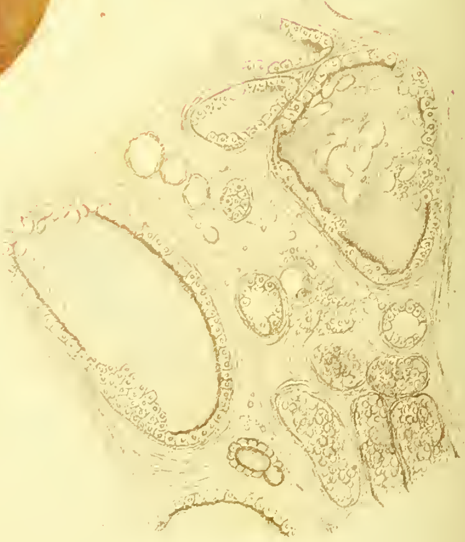

Fig.

PLATE XVI.

Fig. 1.—Thrombosis of one of the Branches of the Splenic Artery (half nat. size). *a*, splenic artery; *b*, one of the extremities of the thrombus; *i*, infarct.

Fig. 2.—Hypertrophy, with Colloid Degeneration of the Thyroid Gland—Goître (half nat. size). *a a*, Superior and inferior thyroid arteries going to the two hypertrophied lobes of the gland; *t*, trachea.

Fig. 2′.—Surface of section of one of these lobes (nat. size). The surface, smooth and slightly shining, shows yellowish gelatinous-like masses in the alveolar spaces, which are bounded by fibrous tissue.

Fig. 2″.—Microscopic section of the same lobe (90 diam.). *a*, follicle lined with unaltered epithelial cells; *c c*, follicles filled with and distended by a hyaline refractile mass (colloid). A certain number of the follicles show an intermediate change; *f*, inter-alveolar fibrous band.

Fig. 2‴.—Cells showing various degrees of invasion by the colloid substance.

Fig. 3.—Caseous Degeneration of the Supra-renal Capsules in a Case of Addison's Disease. The yellow patches seen on the section of the organs are the diseased parts.

Fig. 4.—Tuberculosis of one of the Bronchial Lymphatic Glands (half nat. size). The tissue of the gland is congested, violet and infiltrated with tubercular granulations.

Fig. 5.—Secondary Epithelioma of a Lymphatic Gland of the Neck in a Case of Laryngeal Epithelioma (nat. size). The surface of the section of this gland, which is of slightly yellowish colour, and strewn with white points and numerous blood-vessels, on pressure allows the escape of small worm-like clotted masses, which are composed of epithelial elements.

Fig. 5′.—A, microscopic section (35 diam.) of the same gland; fibrous bands circumscribe alveoli filled with epithelial cells. B, some of these cells.

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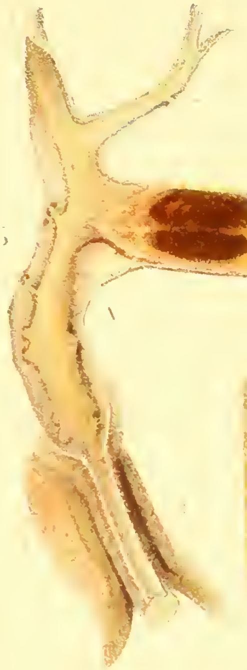

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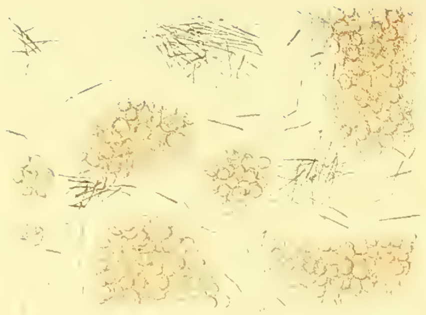

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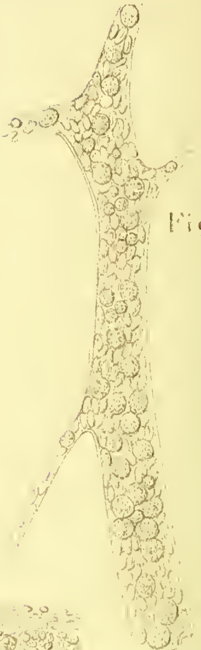

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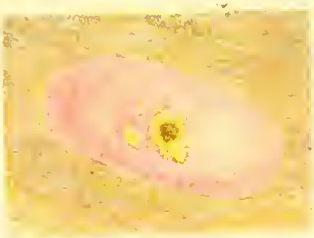

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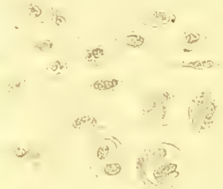

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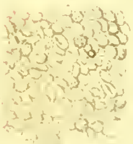

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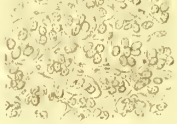

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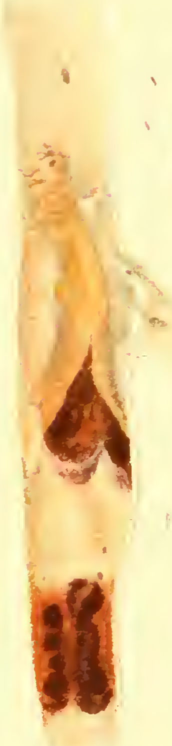

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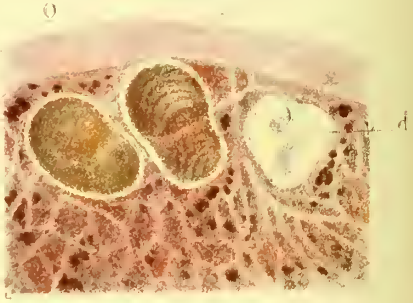

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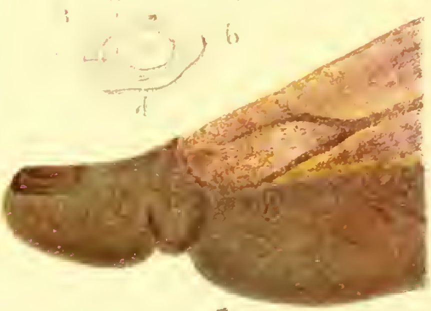

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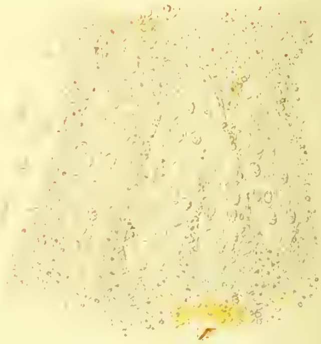

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PLATE XVII.

Fig. 1.—Leukæmia. Vessel of the retina presenting in its interior red corpuscles and numerous white corpuscles. The latter, which are larger, granular and nucleated, are of very variable dimensions. (250 diam.)

Fig. 1′.—Blood from the heart of the same patient, composed of red and white globules.

Fig. 2.—Melanæmia. Crystals of hæmatoidin found in the blood of the heart of a patient the greater part of whose viscera were pigmented. Fibrinous filaments and red corpuscles. (250 diam.)

Fig. 3.—Malignant Pustule (nat. size). This lesion, situated at the right lateral part of the neck, shows a central brownish pustule upon a prominent rosy base; this pustule is surrounded by other smaller yellowish ones.

Fig. 3′.—Blood from the right side of the heart of the same patient, in which are seen motionless bacteria, isolated or grouped, between the agglutinated red corpuscles (350 diam.).

Fig. 4.—Proliferative Phlebitis of the Pulmonary Veins. P, left auricle at the point of entry of the pulmonary veins; *t*, healthy vein; *s*, pulmonary vein partly obliterated by fibroid tissue traversed by numerous vessels; *v v v*, obliterated orifices of other veins (half nat. size). Q, section, perpendicular to the root of the lung, of the same veins obstructed by fibrinous coagula, one of which is already much altered (nat. size).

Fig. 5.—Thrombosis of the Portal Vein with an Organized Thrombus (half nat. size). Trunk of the portal vein and its divisions. In the interior of this trunk is a blood clot; in the branches a sort of hollow sheath formed of fibroid tissue, adherent towards its extremities to the wall of the vessel; *t*, tissue of the liver.

Fig. 6.—Phlebitis of the Femoral Vein (half nat. size). The inner coat of the vessel is injected, and presents at *p* yellowish points analogous to pustules. Blood clots above and below; thickening of the wall of the vein.

Fig. 6′.—Perpendicular section of the wall of this vein opposite one of the points indicated. *a*, endothelium; *b*, young cells arranged in alveolar spaces. (250 diam.)

Fig. 7.—Secondary Epithelioma of a Vein. A, External iliac vein, on the inner surface of which there exists a cancerous nodule circumscribed by vivid injection (half nat. size). B, perpendicular section of the same altered and obstructed vein; *a*, middle coat; *b*, outer coat; *c*, inner coat; *d*, clot, partly fibrinous and partly cancerous (nat. size). C, corresponding artery, of which the outer coat alone is altered.

Fig. 7′.—Microscopic section at the peripheral part of the coagulum. Granular fibrinous substance with spaces which are filled with epithelial cells. A crystal of hæmatoidin. (250 diam.)

Fig. 7″.—Spherical, fusiform, or stellate cells from the wall of the vein affected with epithelioma. Some of these cells are in process of multiplication. (250 diam.)

Fig. 8.—Dry Gangrene, so-called Senile Gangrene (half nat. size). Great toe of the right foot; the dorsal artery of the foot obliterated by blood clot.

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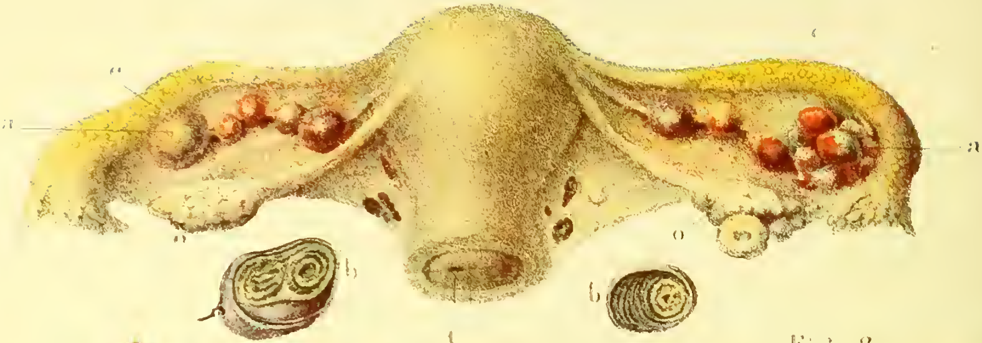

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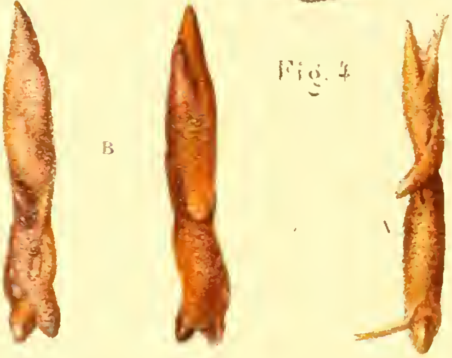

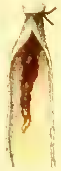

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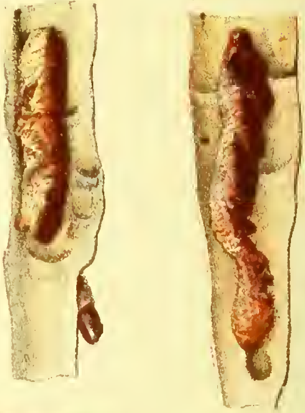

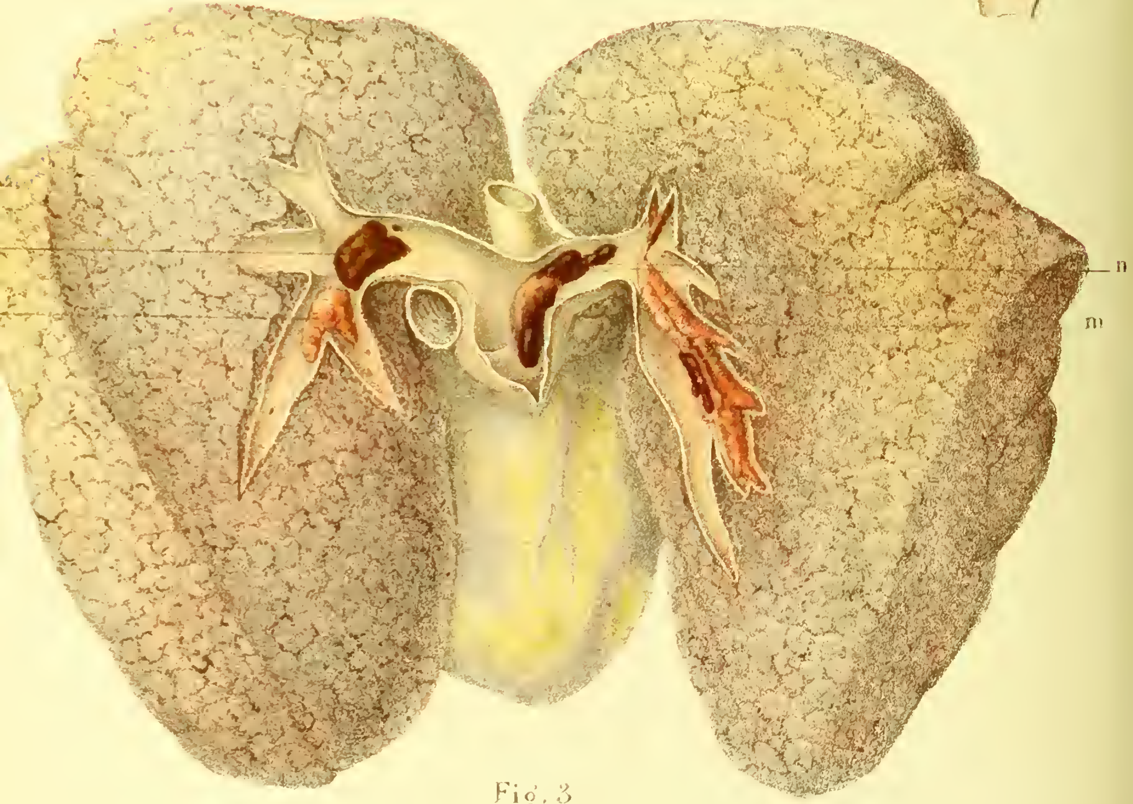

Fig. 3

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PLATE XVIII.

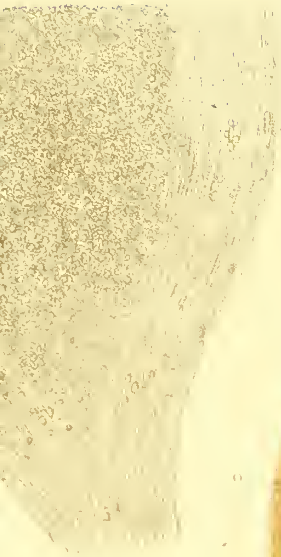
Fig. 1.—Varices of the Ovarian Veins (half nat. size). These veins, *a a*, present multiple rounded tumours, formed by a central coagulum and the wall of the dilated vein; *b b*, a section of these tumours to show the concentric arrangement of the fibrinous layers (nat. size); *o o*, ovaries; *t*, os tincæ, partly occluded; *c c*, yellowish granules scattered over the surface of the Fallopian tubes, composed chiefly of carbonate of lime.

Fig. 2.—Thrombosis of both Femoral Veins (half nat. size). One of the coagula, *f*, has been displaced to show the valve mouldings which exist along its course.

Fig. 3.—Pulmonary Embolism (half nat. size). Trunk and both divisions of the pulmonary artery obstructed by blood clots, some recent, *n*, *o*, others of older date, *m*, *m*.

Fig. 4.—Embolism of the Right Heart in a Case of Sudden Death. *A*, *B*, fibrinous concretions found on the right side of the heart, and formed in the veins, as shown by their cylindrical form, and the impression left upon them by the valves of the veins, seen both at their extremities and along their course. The coagulum, *B*, is shown on both its surfaces.

Fig. 5.—Fibrinous Clot in Femoral Artery Five Days after Ligature (half nat. size).



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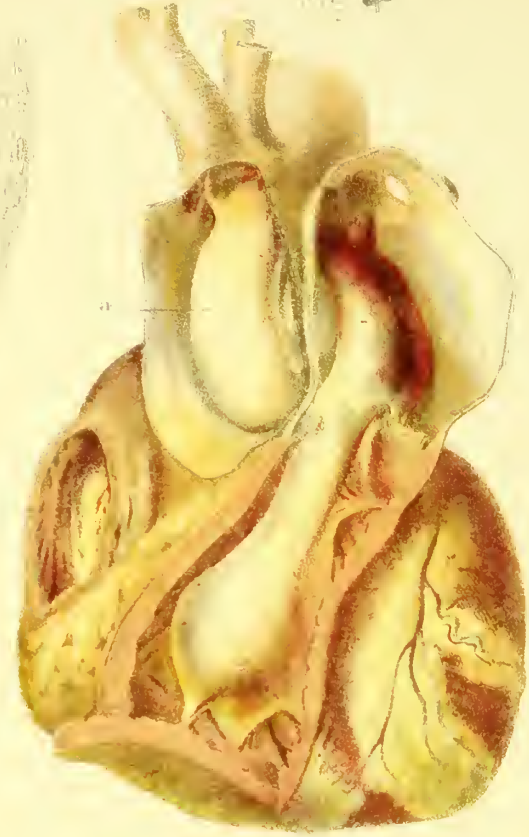

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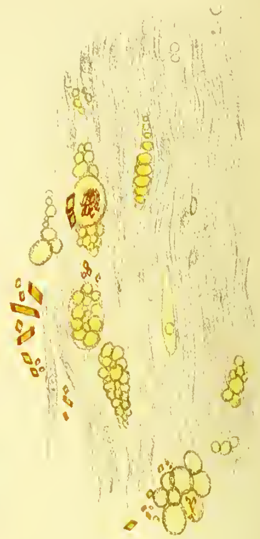

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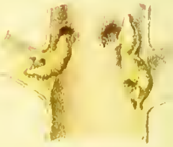

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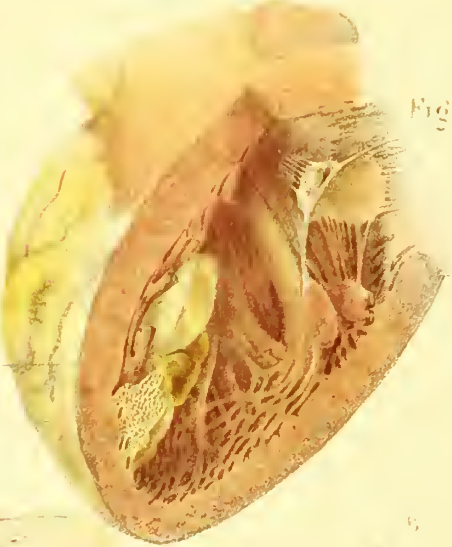

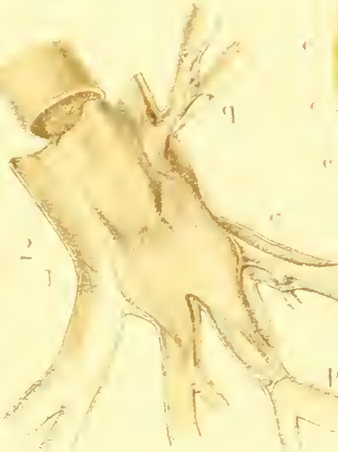

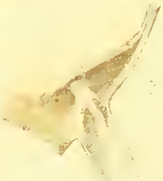

Fig.

PLATE XIX.

Fig. 1.—Pulmonary Embolism (half nat. size). Two emboli arrested opposite the projecting ridges formed by the divisions of the pulmonary artery. These emboli, which are already old, and adherent to the wall of the vessel, are organized at their peripheral part.

Fig. 1′.—Microscopic section of one of these emboli. The circumference is occupied by a fibroid tissue of new formation, in the interstices of which are grains of hæmatin. The centre shows only molecular and fatty granules, due to the transformation of fibrine and blood corpuscles.

Fig. 2.—Pulmonary Embolism with organized Emboli (half nat. size). The right branch of the pulmonary artery is partly obstructed by a fibrinous plug, *f*, organized at its periphery, and extending in the form of hollow cylinders, *q q*, which end by adhesion to the wall of the artery.

Fig. 2′.—*A*, left branch of the same vessel (half nat. size); *p p*, fibrous bands opposite the ridges formed by the division of the vessel. These bands or bridles indicate old absorbed embolic concretions; *a*, false membrane cut across to show a branch of the artery subjacent to it, which has been obliterated (nat. size). *B*, a section to show the prolongation, *s*, which is continued from this false membrane so as to obliterate the artery.

Fig. 3.—Pulmonary Embolism. Microscopic drawing of an organized thrombus; elongated fusiform cells united by amorphous material, some of them distended by oil globules containing crystals of hæmatoidin.

Fig. 4.—Cardiac Thrombosis (half nat. size). The entire heart seen from the front. In the interior of the right ventricle is a fibrinous clot entangled in the columnæ carneæ, moulded to the valves of the pulmonary artery, into which it is prolonged. A similar coagulum in the right auricular appendix, *o*, and in the aorta, *a*.

Fig. 4′.—Fibrinous filaments and leucocytes composing the above ventricular coagulum (300 diam.).

Fig. 5.—Polypi of the Heart, Fibrinous Cysts or Partial Thrombosis of the Left Ventricle (half nat. size). Median section of the left ventricle; *c c*, three fibrinous concretions, softened in their centre, and situated in the angle formed by the septum and the anterior wall. Two smaller concretions existed at the opposite point.

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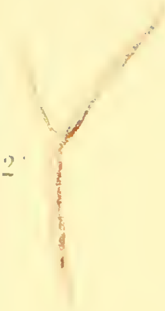
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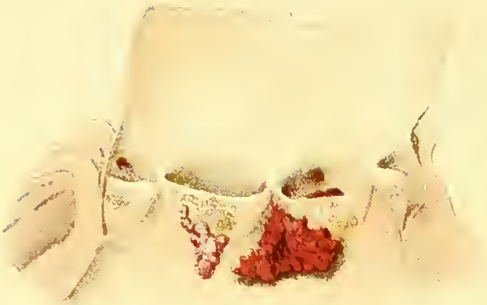

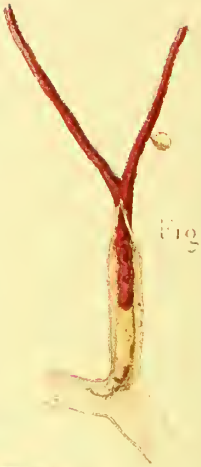
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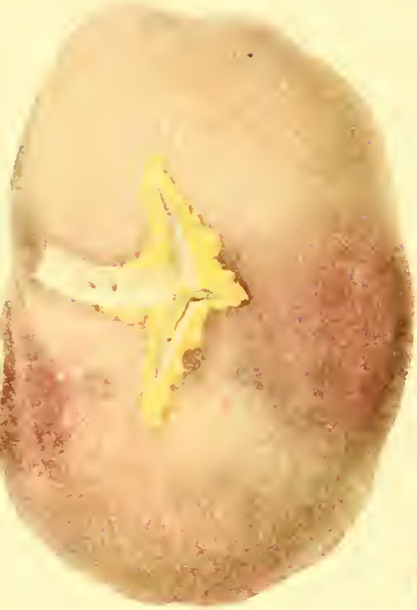

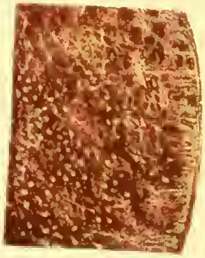

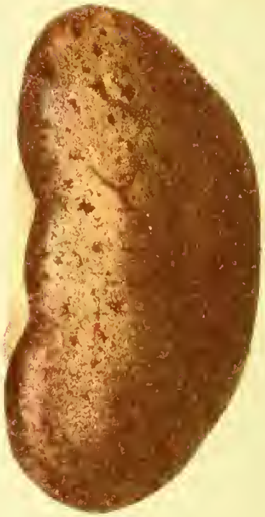
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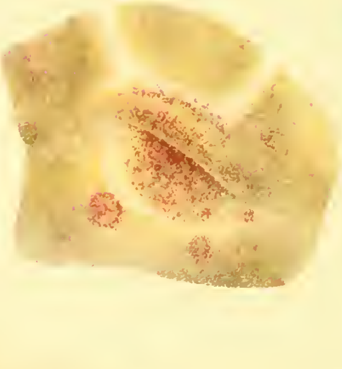

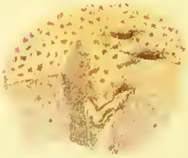
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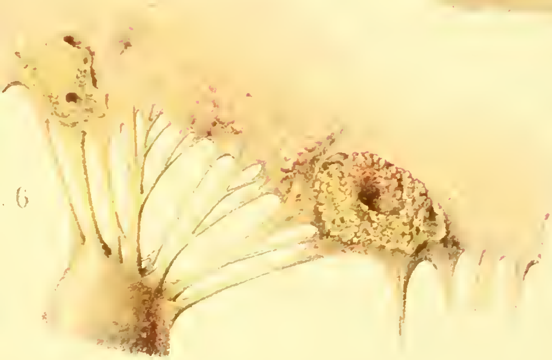
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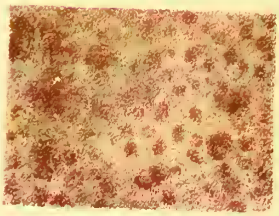
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Fig. 5

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PLATE XX.

Fig. 1.—Endocarditis and Aneurism, with Perforation of the Aortic Valves (half nat. size). These valves are roughened and softened on the inner aspect; one of them presents two orifices obstructed by fibrinous plugs. A plug of the same kind is commencing to be formed on the neighbouring valve.

Fig. 2.—Cerebral Embolism. One of the branches of the Sylvian artery obliterated by a clot, a part of which, about seven millimètres long, is distinguished by its pale tint from the accessory coagula formed at its extremity (nat. size). *t*, a pisiform tumour on the external surface of the vessel.

Fig. 2′.—Smaller branch of the same artery, also obstructed by a fibrinous clot (nat. size).

Fig. 2″.—Convolution of the brain supplied by the above vessels (nat. size). Injection and punctiform hæmorrhage around a patch of red softening.

Fig. 3.—Splenic Embolism (half nat. size). Entire spleen, the part of which corresponding to an obliterated arterial branch forms a brownish prominent zone (first stage of an infarct).

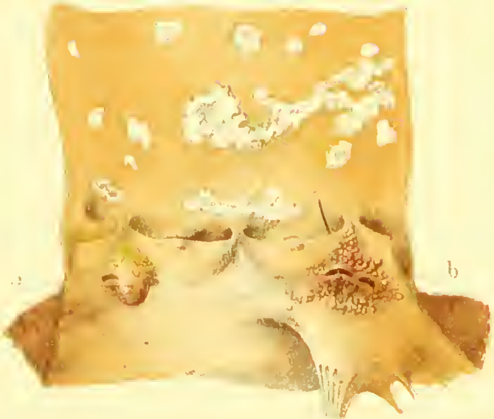
Fig. 3′.—Sectional surface at the level of the above zone. The splenic parenchyma is strewn with spots of hæmorrhage.

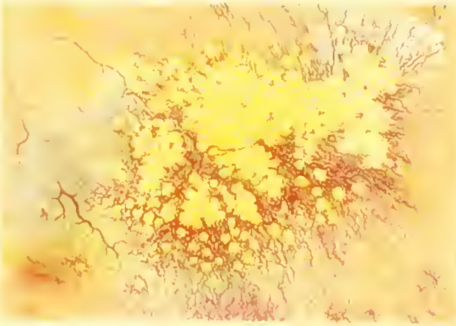
Fig. 4.—Renal Embolism (half nat. size). Entire kidney, the surface of which presents numerous points of hæmorrhage and some cicatrices, the result of embolism.

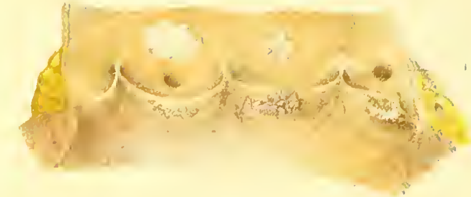
Fig. 4′.—Obstructed branch of artery, corresponding to one of the cicatrized points (nat. size).

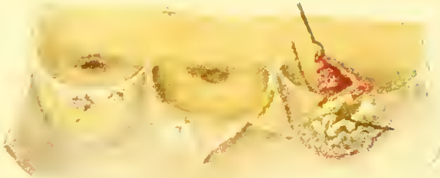
Fig. 5.—Capillary Embolisms of the Stomach (nat. size). The inner surface of the mucous membrane is strewn with hæmorrhagic points.

Fig. 6.—Endocarditis and Aneurism, with Perforation of the Mitral Valve (nat. size). The inner surface of this valve presents two aneurysmal pouches, perforated at the summit like craters.









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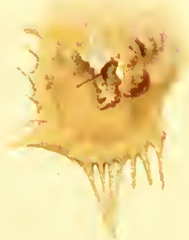

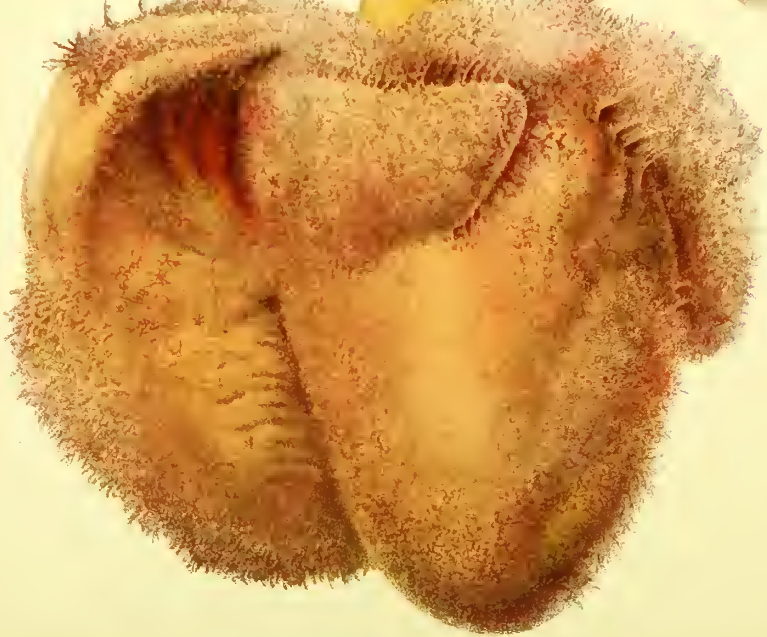

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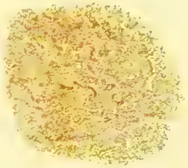

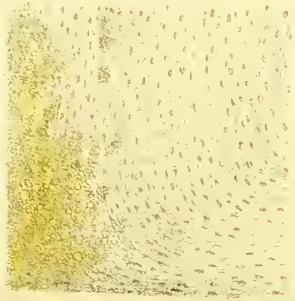

Fig. 6

Fig. 3

PLATE XXI.

Fig. 1.—Rheumatic Pericarditis (half nat. size). The cavity of the pericardium is laid open, and the two serous layers, parietal and visceral, adherent at the base of the heart, are, throughout the remainder of their extent, covered by membranous layers, which have a villous appearance at several parts; *a*, aorta.

Fig. 1′.—Part of the false membrane, to show the varicose condition of the vessels of new formation.

Fig. 2.—Tubercular Pericarditis. Part of the parietal pericardium at the posterior part of the heart. The fibro-serous coat is covered with tubercular granulations, isolated or clustered together, and circumscribed by capillary vessels, which are injected and very large.

Fig. 3.—Villous Endocarditis (half nat. size). Orifice of aorta and its valves, covered towards the median part by clustered vegetations, which form a sort of bouquet upon one of them. A similar cluster, formed in the neighbouring valve, where it has left a characteristic mark, is found in the left Sylvian artery, which it completely obstructs. Small atheromatous patches on the surface of the aorta; *a*, orifice of the coronary artery.

Fig. 3′.—Summit of one of the above vegetations (200 diam.).

Fig. 4.—Villous and Ulcerative Endocarditis (half nat. size). Aortic orifice and sigmoid valves of the aorta. Two of these valves show on their ventricular surface small warty clusters circumscribed by injected vessels; one of these is beginning to soften in its centre. The whole is softened, greyish, swollen, and prominent, and has an aspect which recalls that of the cerebral convolutions. It is covered by a fibrinous layer, which is held up with a hook. *a*, a commencing aneurysm.

Fig. 5.—Aneurysmal and Ulcerative Endocarditis (half nat. size). Sigmoid valves of the aorta; at three different points of these valves are warty granulations and small aneurysmal pouches, perforated at the base, *a* and *b;* these pouches project towards the ventricle. Atheromatous patches on the inner surface of the aorta.

Fig. 5′.—Mitral valve of the same patient, with an aneurysmal pouch perforated and filled with fibrinous coagulum.

Fig. 5″.—Microscopic drawing of the same valve in the neighbourhood of a perforation, after addition of acetic acid. Nuclei and embryonic cells in the course of fatty degeneration at *g*.

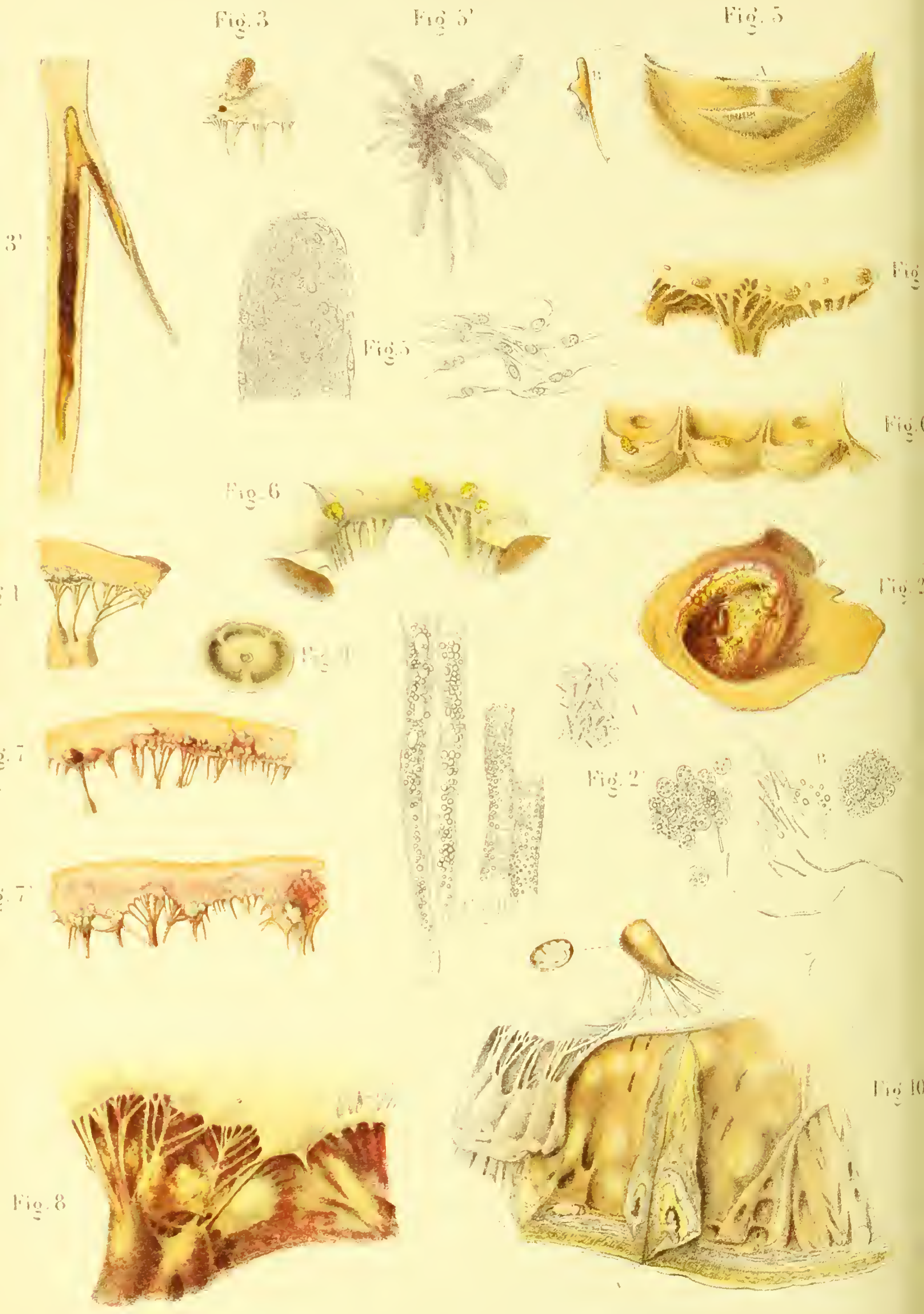
Fig. 3
Fig 3'
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A
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Fig. 5
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1
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g. 7
Fig. 2'
A
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Fig. 8
Fig 10

PLATE XXII.

Fig. 1.—RHEUMATIC ENDOCARDITIS (half nat. size). Part of the thickened mitral valve, presenting on its auricular surface, near the free border, vegetations which give rise to a sort of crown or wreath, which is continuous, except at one point of the circumference.

Fig. 2.—ULCERATIVE ENDOCARDITIS (half nat. size). Mitral orifice seen from the auricle. The orifice is narrowed, and the valve is injected, ecchymosed, and strewn with small rounded projections; at one point there is a deep ulcer which has been worn smooth by the action of the blood.

Fig. 2′.—A, Molecular granules and small rods from the bottom of the ulcer; B, cells and various corpuscles found in the blood.

Fig. 3.—WARTY ENDOCARDITIS (half nat. size). Part of the mitral valve whose auricular surface presents small isolated projections, and a vegetation covered with similar projections. Below this vegetation is a wrinkled surface, which is the mark left by a similar vegetation.

Fig. 3′.—Femoral and profunda arteries obstructed by a fibrous clot formed around an embolus, coming from the above valve. The different shades of colour of the clot indicate different ages.

Fig. 4.—MITRAL ENDOCARDITIS WITH URATE DEPOSITS (half nat. size). The mitral valve is strewn with small granular masses, resistant and almost stony, which, when dissolved in acetic acid, give crystals of uric acid.

Fig. 5.—VILLOUS ENDOCARDITIS OF THE AORTIC VALVE IN A CASE OF ALCOHOLISM (half nat. size). A, one of the aortic valves which is opaline, and thickened with villous growths on its ventricular aspect; B, perpendicular section of the same valve (nat. size).

Fig. 5′.—Papillary cluster from the adjacent valve (10 diam.).

Fig. 5″.—Tip of one of the papillæ partly composed of elongated and fusiform cells.

Fig. 6.—ENDOCARDITIS IN A CASE OF SCROFULA (half nat. size). Mitral valve injected, strewn with yellowish miliary granulations, some of which are covered with a layer of fibrin.

Fig. 6′.—Sigmoid valve of the aorta of the same patient with similar granulations.

Fig. 7.—TUBERCULAR ENDOCARDITIS (half nat. size). Mitral valve injected, strewn with yellowish miliary granulations, some of which are covered with a layer of fibrin.

Fig. 7′.—Tricuspid valves of the same patient with a mass of yellowish granulations, chiefly seated on the prolongations of the valve and its auricular aspect (half nat. size).

Fig. 8.—FIBROMAS OF THE CHORDÆ TENDINEÆ OF THE MITRAL VALVE. This lesion shows itself in the form of small tumours, covered by a fibrinous layer, and seated upon the tendinous cords (nat. size).

Fig. 9.—CONGENITAL NARROWING OF THE PULMONARY ORIFICE OF THE HEART (half nat. size). The valves which close this orifice, united together, form a sort of membranous septum, the centre of which is perforated by an extremely narrow orifice.

Fig. 10.—GUMMOUS MYOCARDITIS (half nat. size). Upper part of left ventricle, the inner surface of which is strewn with projecting yellowish tumours (syphilitic gummata). On a vertical section, one of the tumours, *v*, has a crescentic form. The horizontal section, *h*, shows the wall hypertrophied and partly transformed into fibrous tissue; *c*, section of diseased columna carnea.

Fig. 10′.—Muscular fibres of the same heart in a state of advanced fatty degeneration.

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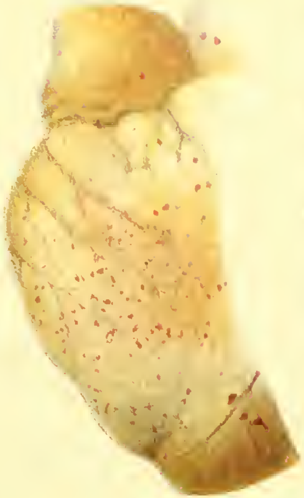

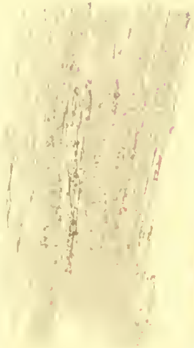

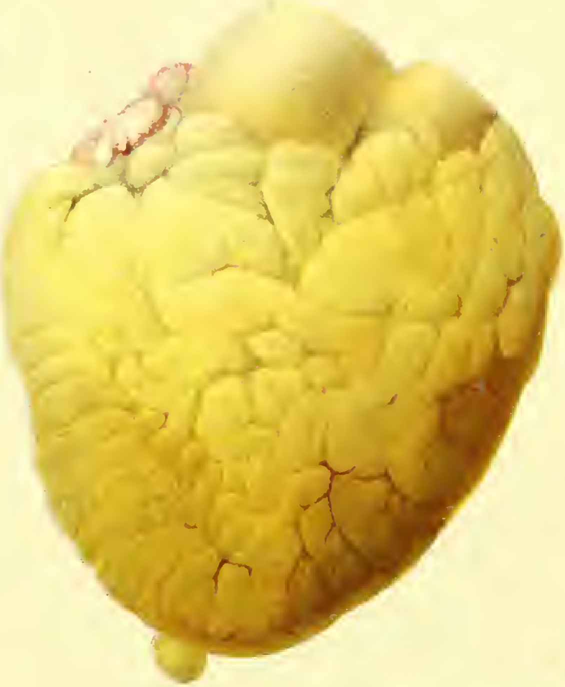

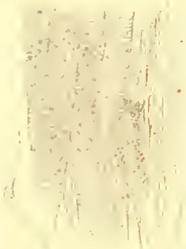

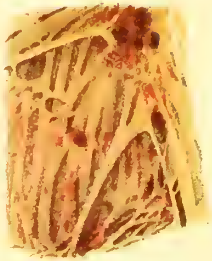

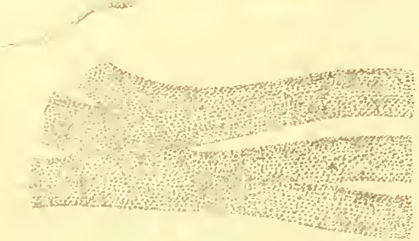

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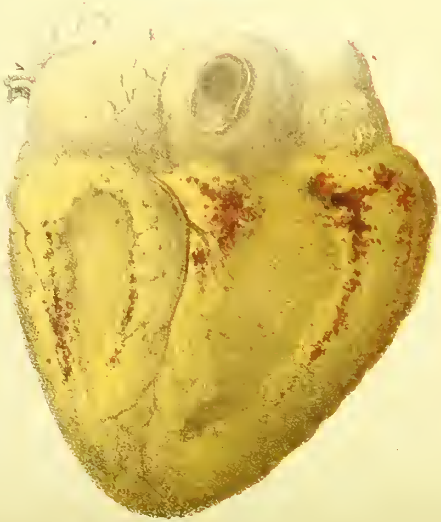

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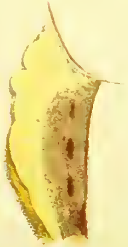

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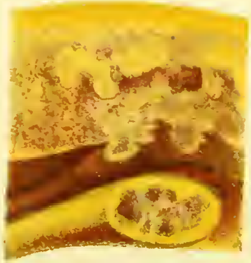

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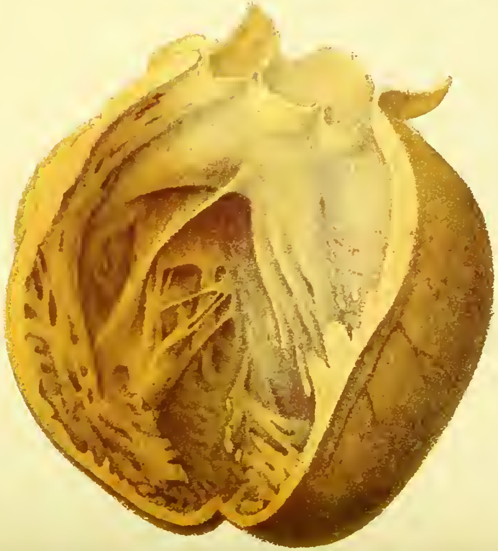


MEDICO-CHIRURGICAL SOCIETY

PLATE XXIII.

Fig. 1.—Proliferative or Sclerous Myocarditis (nat. size). Horizontal section of the wall of the left ventricle and one of the columnæ carneæ of the first order. This wall presents from within outwards—1°, a thin fatty layer; 2°, the muscular layer almost entirely transformed into a greyish vascular tissue, strewn with yellowish spots and smaller ecchymotic spots; 3°, endocardium, with a subjacent hæmorrhagic effusion; 4°, a columna carnea, greyish or livid in the centre, and yellowish at the edges.

Fig. 1′.—Granular muscular fibres and fusiform cells coming from one of the less altered points of the above ventricular wall. In the most altered points there is an absence of muscular fibres, which are replaced by fibroid tissue infiltrated with fatty granules. (250 diam.)

Fig. 2.—Myocarditis and Fatty Accumulation in the Heart of a Drinker (half nat. size). Vertical section of the heart, formed by two distinct layers, a very thick fatty layer and the muscular layer, which is strewn with whitish spots formed by tough fibrous tissue.

Fig. 2′.—Altered muscular fibres and fibroid tissue with fusiform cells (250 diam.).

Fig. 3.—Fatty Accumulation on the Heart of an Alcoholic (half nat. size). The whole heart is seen from the front, covered in its whole extent by a thick layer of fat; distinct fatty lumps at the base and apex of the organ.

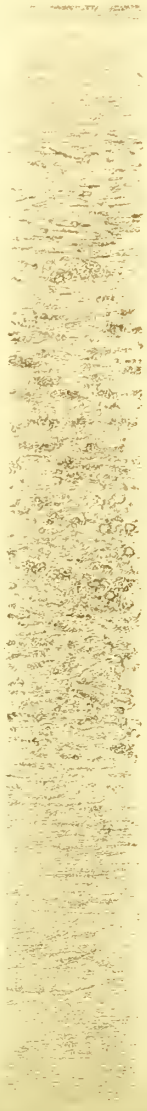
Fig. 4.—Fatty Degeneration of the Heart from Phosphorus (half nat. size). The entire heart seen on its posterior surface; the organ is of orange yellow colour, and shows hæmorrhagic spots arranged in bands, which are situated beneath the pericardial layer.

Fig. 4′.—Muscular fibres of the same organ in process of fatty degeneration. The fibrillar appearance is replaced by fine drops of fat arranged in regular lines.

Fig. 5.—Secondary Dilatation and Hypertrophy of the Right Heart (half nat. size). Whole heart seen on anterior surface, and opened so as to show the dilated right ventricular cavity. The internal surface is smooth and shining, and the walls firm and indurated.

Fig. 6.—Hæmorrhage or Purpura of the Walls of the Heart in a case of Scarlet Fever (half nat. size). Right half of the anterior wall of the heart strewn with points of hæmorrhage which are chiefly distributed along the course of small vessels.

Fig. 6′.—Part of the inner surface of the same heart with multiple hæmorrhagic spots beneath the endocardium.



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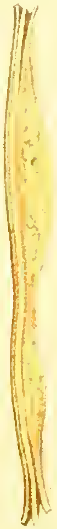

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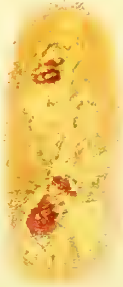

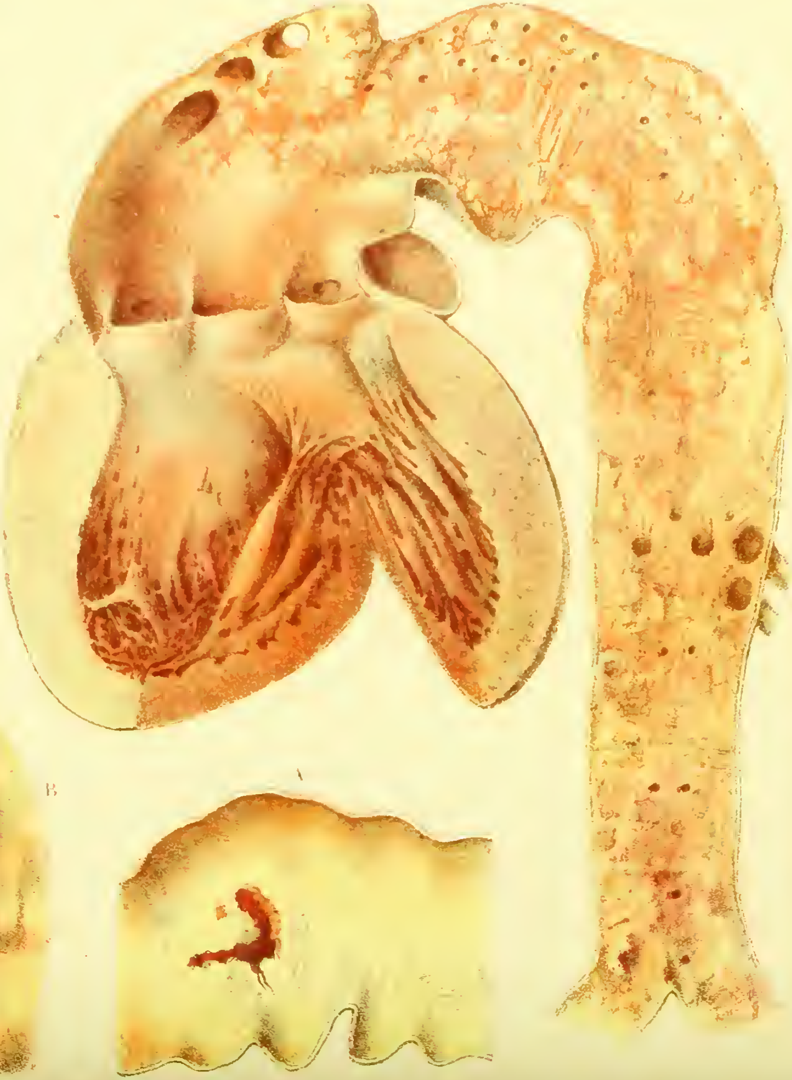

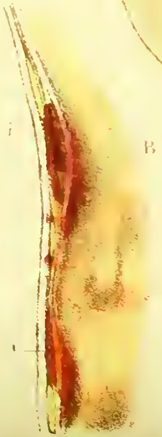

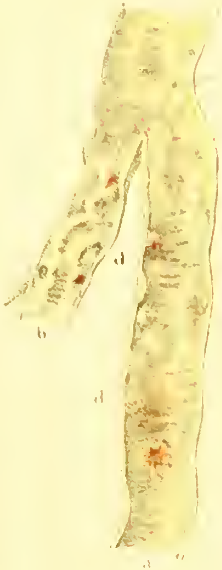

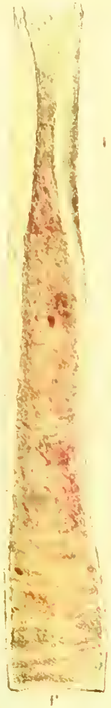

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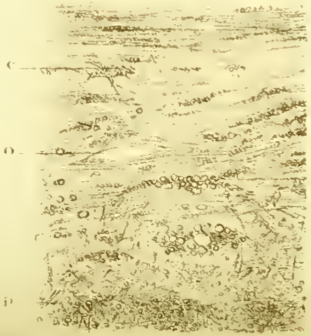

LEEDS & WEST-RIDING
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PLATE XXIV.

Fig. 1.—Endarteritis Nodosa and Dilatation of the Aorta—Secondary Hypertrophy of the Left Ventricle (half nat. size). The aorta, which is laid open along its entire length, presents on its inner surface small greyish or yellowish mammillated projections, chiefly situated in the neighbourhood of the orifice of arteries, which are narrowed by them. The change is but little marked in the first part of the aorta; but the valves are somewhat retracted and the orifice narrowed. The mitral valve is intact, the walls of the ventricle considerably hypertrophied.

Fig. 1′.—Perpendicular section of the wall of the aorta, in which are seen two of the projections shown above; *i*, internal coat, the deeper layers of which are the seat of the change; *m*, middle coat; *e*, external coat.

Fig. 1″.—Microscopic section of the same wall (50 diam.); *i*, internal coat; *p*, cells of the deep layer of this membrane in a condition of hyperplasia, and in process of fatty degeneration; *m*, middle coat undergoing fatty degeneration, in consequence of the pressure to which it is subjected; *e*, external coat.

Fig. 1‴.—Microscopic drawing made at the junction of the inner and middle coats; *e e*, stellate cells containing fatty granules; *o*, cellular space; *p*, atheromatous magma, consisting of fat granules and crystals of cholesterine (380 diam.).

Fig. 2.—Warty Endarteritis (Endartérite Verruqueuse) (half nat. size) The femoral artery, *a*, and the profunda, *b*, both present on their inner surface rounded projections, *d d*, less numerous and less distinct than in the preceding specimen. At some points on the inner surface of these vessels are seen small reddish spots, due to vascular injection.

Fig. 3.—Calcification of Arteries (Pétrification Artérielle) (half nat. size). Femoral artery, the walls of which are indurated and incrusted with lime salts. At *t*, the change is so great that the walls cannot be unfolded, and the vessel has become a rigid tube like a pipe.

Fig. 4.—Hæmorrhage of the Coats of the Aorta (half nat. size). A, part of the aorta presenting a large yellowish plate, with a brownish ecchymotic spot subjacent to the inner coat. B, perpendicular section of the wall of the same vessel; *i i*, blood clots in a new growth situated between the inner and middle coats.

Fig. 4′.—Another part of the same vessel with blood spots resembling the preceding, rupture of the inner coat, and tendency to formation of an aneurysm.

Fig. 1'

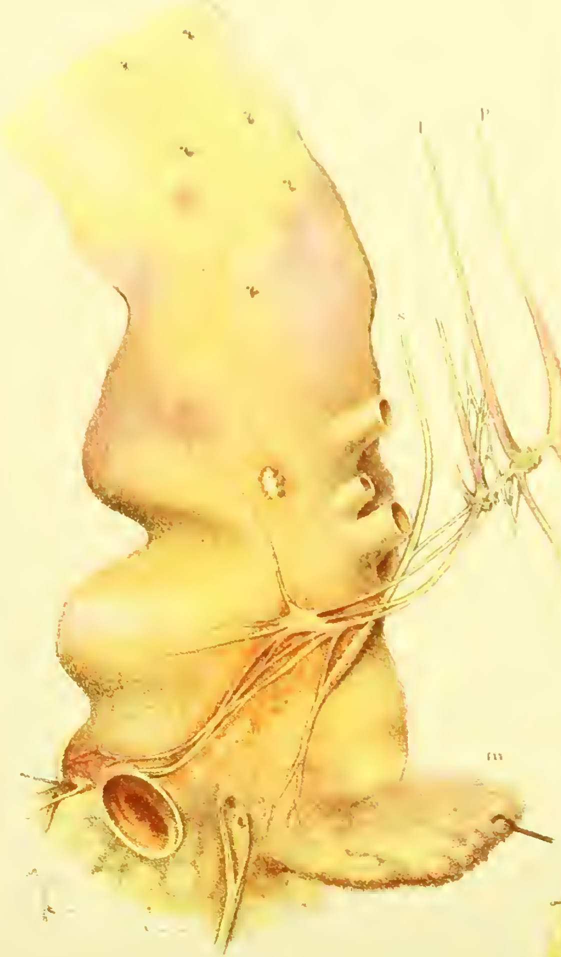

Fig. 2

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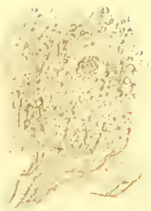

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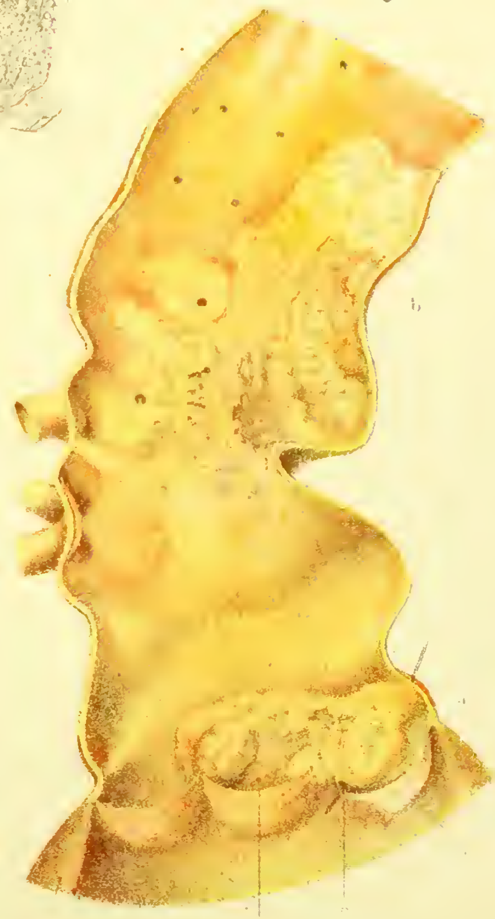

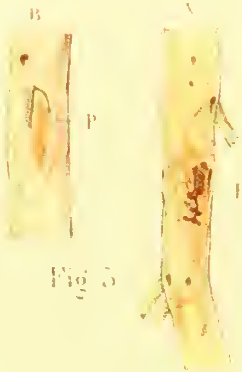

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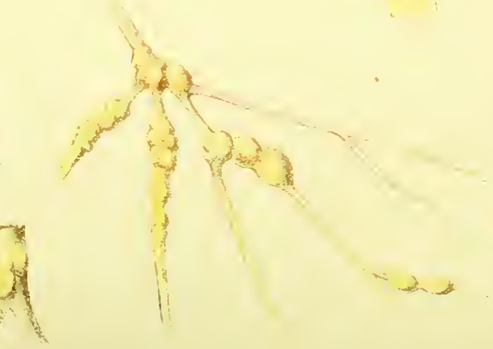

Fig. 3

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PLATE XXV.

Fig. 1.—AORTITIS IN PLATES IN A CASE OF ANGINA PECTORIS (half nat. size). The ascending transverse and part of the descending arch of the aorta are seen on their inner surface; *a* and *b*, two patches of the change, one at the commencement of the vessel, the other in the transverse arch. These plates have sinuous and projecting borders, especially at *a*. *v*, sigmoid valve turned back to show the narrowed orifice, *c*, of one of the coronary arteries; *c'*, the almost imperceptible orifice of the other coronary artery.

Fig. 1'.—The same part of the aorta as above, seen on its external surface, with the cardiac plexus of nerves (half nat. size); *c*, anterior coronary artery; *c'*, posterior coronary artery; *v*, great coronary vein; *m*, auricular appendix held back; *g*, ganglion and cardiac plexus applied to the outer surface of the inflamed and strongly injected aorta; *p*, pneumogastric nerve; *l*, recurrent laryngeal nerve; *s*, branch of the sympathetic going to the cardiac plexus with branches of the pneumogastric; *o*, œsophageal branches; *b*, nerve branches going to the bronchi.

Fig. 1''.—Molecular and fatty granules, granular corpuscles, and débris of connective tissue fibres, from a small liquid milky spot in the thickness of the plate *a*, between the inner and middle coats (150 diam.).

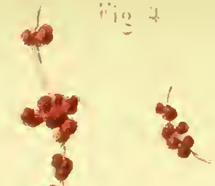
Fig. 2.—MICROSCOPIC DRAWING OF ONE OF THE NERVES COMPOSING THE CARDIAC PLEXUS. The nerve tubes are slightly granular, and are enclosed in and compressed by young round cells, so that there is evidently an inflammatory process going on. Most of the other branches are similarly affected.

Fig. 3.—PERIARTERITIS NODOSA (half nat. size). Trunk of the basilar artery affected with pea-like nodosities, originating in the outer coat.

Fig. 4.—Sylvian artery from the same patient, similarly affected.

Fig. 5.—ENDARTERITIS AND ATHEROMA OF THE CEREBRAL ARTERIES. B, basilar trunk, on the inner surface of which is a spindle-shaped atheromatous plate, P. This plate, which is supported only by the superficial layer of the inner coat, is partly detached at the end where exposed to the blood stream. A, Sylvian artery presenting the same change, with the difference that the atheromatous nodule P, which is raised by the blood current, has caused a deposit of fibrine, which has contributed to the complete plugging of the vessel, and the production of softening of the corresponding part of the brain.

Fig. 4



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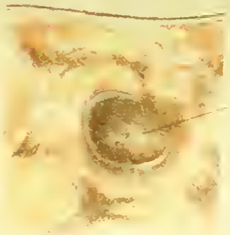

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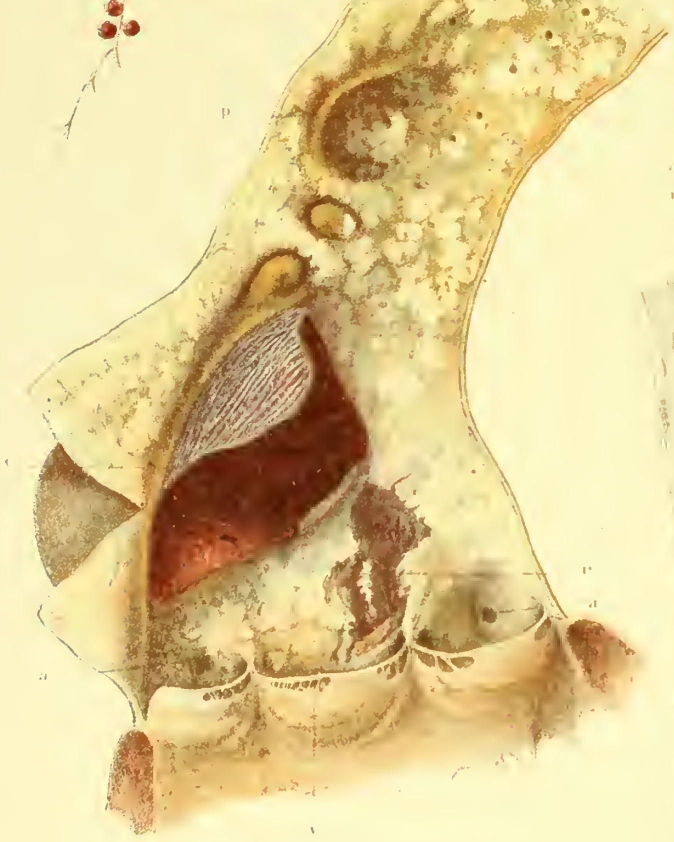

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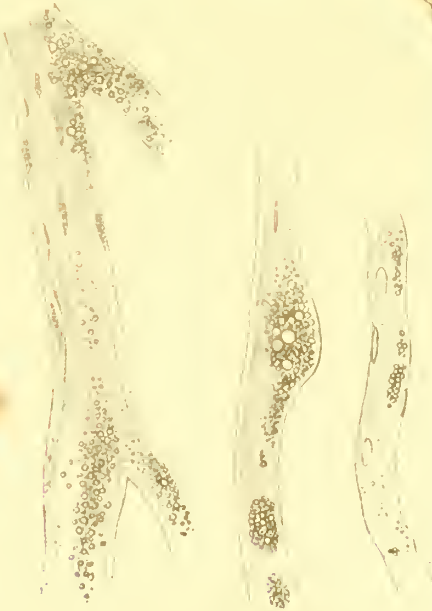

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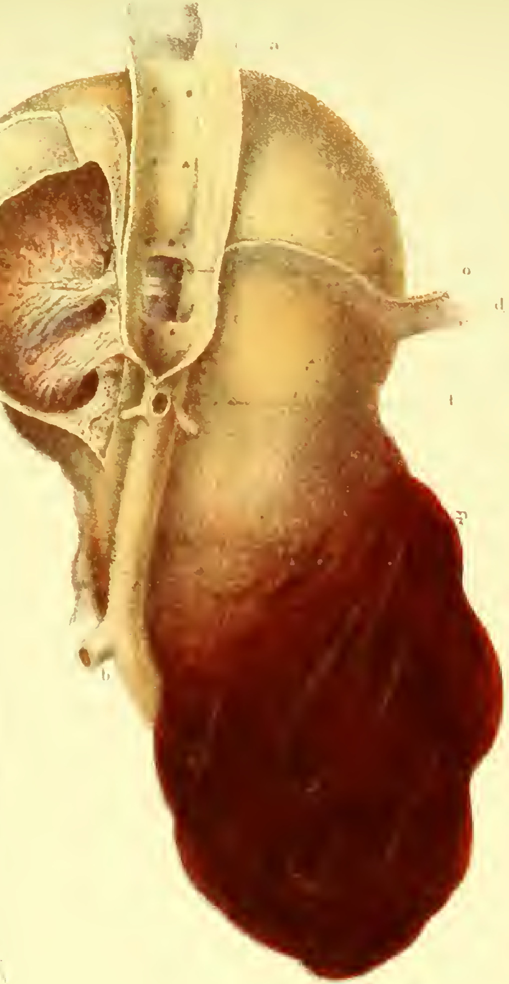

Fig. 3

LEEDS & WEST-RIDING
MEDICO-CHIRURGICAL SOCIETY

PLATE XXVI.

Fig. 1.—Aortitis and Multiple Aneurysms of the Aorta (half nat. size). Part of thoracic aorta, on the inner surface of which are several aneurysmal depressions or pouches, the deepest seen at *a*.

Fig. 1′.—Perpendicular section of the wall of the aorta, passing through the aneurysmal pouch *a*. This section shows in the clearest manner that the middle coat has disappeared opposite this pouch.

Fig. 2.—Aortitis, Aneurysms and Rupture of the Aorta at its Origin—Cribriform condition of the Aortic Valves (half nat. size). The two first parts of the thoracic aorta present numerous mammillated projections on their internal surface; *p*, aneurysmal pouch analogous to that in the preceding figure, and formed, like it, subsequently to the disappearance of the middle coat; *c*, stratified blood-clot filling a pouch analogous to the preceding, but much more voluminous; *r*, ulceration and rupture of the wall of the aorta; *a a*, coronary arteries, the orifices of which, like those of most of the vessels arising from the aorta, are narrowed; *v*, sigmoid valves of the aorta fenestrated near their free border, consequent upon the increased blood pressure in the aorta.

Fig. 3.—Aneurysm of the Aorta opposite the Point where the Vessel passes through the Diaphragm (half nat. size). *d*, diaphragm; *c*, vertebral column; *a*, aorta; *b*, termination by division of aorta; *t*, the three arteries forming the cœliac trunk; *o*, orifice of perforation of aorta. This orifice, which is of quadrangular shape, is in a healthy vessel; it is in front of the vertebral column, the bones of which are eroded opposite it; *l*, costo-vertebral ligament dissected by the action of the blood; *n*, wall of aneurysm covered with layers of fibrin; *f*, the same wall burst, and the blood-clot tearing up the tissues in the left iliac fossa.

Fig. 4.—Aneurysms of small Cerebral Arteries (nat. size). Two arterial branches from an old blood extravasation of small size, with multiple miliary aneurysms on their course.

Fig. 5.—Fatty Degeneration of Capillaries. The capillaries of the spinal cord affected with this degeneration, which occupies almost exclusively the formed structures of their walls.

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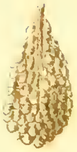

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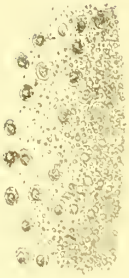

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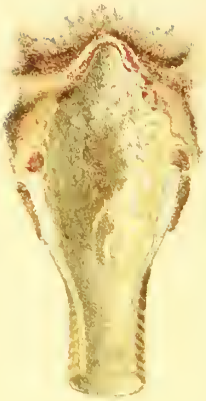

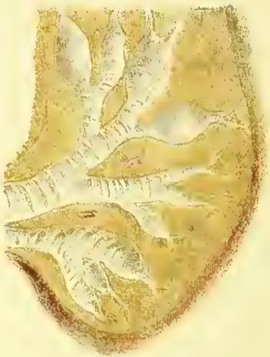

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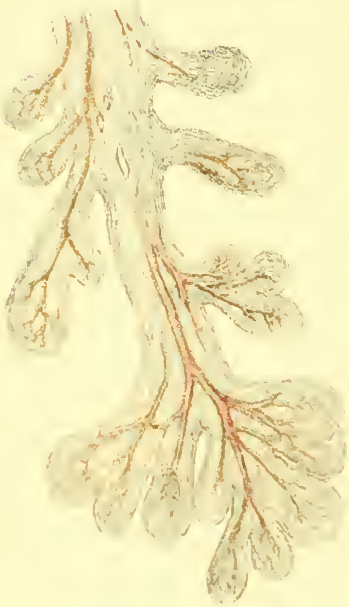

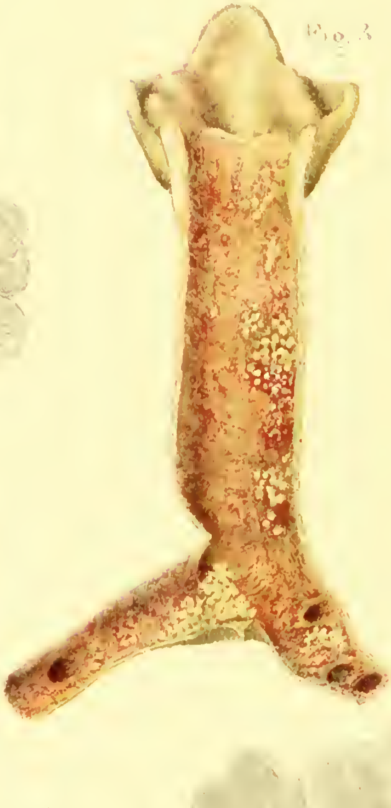

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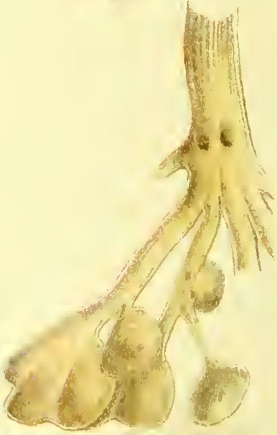

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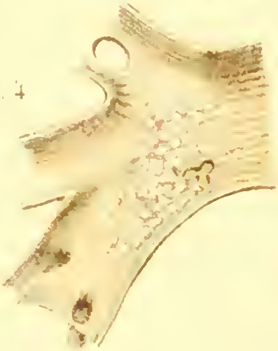

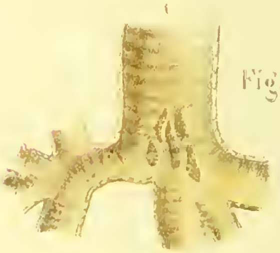

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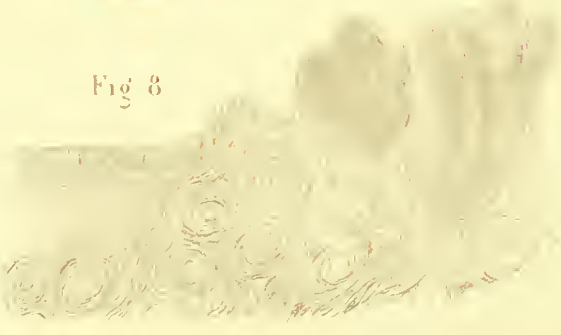


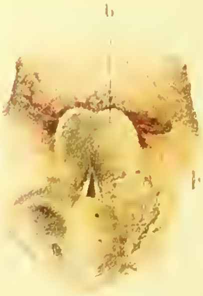


Fig 8

MEDICO-CHIRURGICAL SOCIETY

PLATE XXVII.

Fig. 1.—Polypoid Vegetation of the Velum Palati of a Patient affected with so-called Glandular Angina (nat. size). This vegetation is mammillated and attached by a pedicle, so that its extirpation was easy.

Fig. 1′.—Microscopic section of this vegetation, which is a papillary hypertrophy.

Fig. 2.—Diphtheritic Laryngitis (half nat. size). The larynx, open, is covered throughout the entire extent of its inner surface by a whitish pseudo-membranous deposit, adherent to the mucous membrane, but yet easy to strip off.

Fig. 2′.—Diphtheritic exudation, composed of fibrine and spherical cells, analogous to white blood corpuscles.

Fig. 3.—Variolous Laryngo-Bronchitis (half nat. size). Larynx, trachea, and large bronchi, the mucous membrane of which is red, injected, strewn for the most part with irregular pustules, or small masses of purulent yellowish substance.

Fig. 4.—Tubercular Tracheo-Bronchitis (half nat. size). Trachea, *t*, at its lower extremity, and large bronchi, showing miliary tubercular granulations on the surface of the mucous membrane.

Fig. 5.—Syphilitic Tracheo-Bronchitis and Narrowing of the Bronchi (half nat. size). The trachea, *t*, is the seat of several elongated ulcers, and the two large bronchi are both narrowed at their origin and eroded on their inner surface.

Fig. 6.—Syphilitic Obliteration of the Bronchi (half nat. size). These tubes, whose walls are narrowed and almost entirely fibrous, present points of dilatation and narrowing. The corresponding parenchyma is indurated, retracted, yellowish, and infiltrated with molecular and fatty granules.

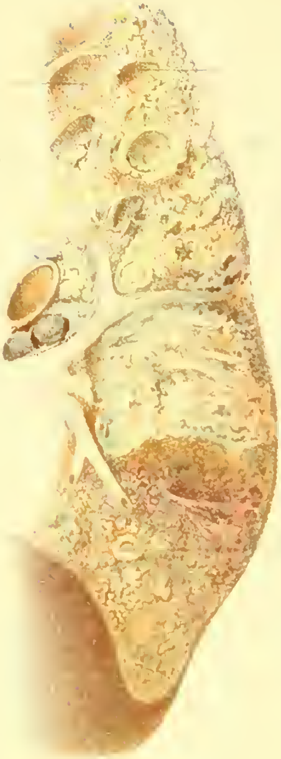
Fig. 7.—Ampullar Dilatation of the Bronchi (half nat. size). A bronchus whose terminal divisions are swollen into the form of ampullæ.

Fig. 8.—Pharyngo-Laryngeal Epithelioma (half nat. size).—The larynx, seen from above and behind, shows a whitish tumour on its posterior border, ulcerated, and scarcely prominent; *b*, base of the tongue and epiglottis.

Fig. 8′.—Microscopic section perpendicular to the surface of the preceding tumour, at the junction of the diseased and healthy parts (150 diam.).

Fig. 8″.—Transverse section of a tubular prolongation composed of polygonal epithelial cells (450 diam.).

Fig. 3



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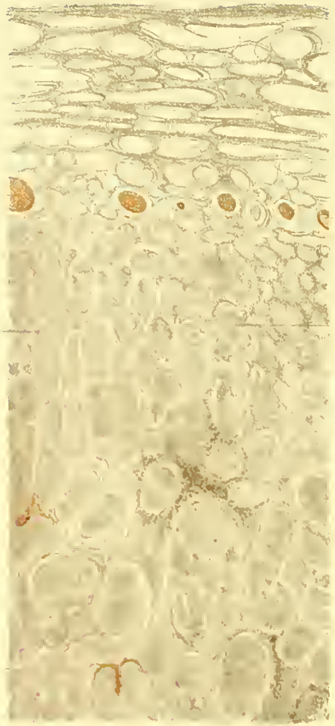

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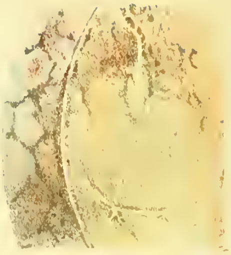

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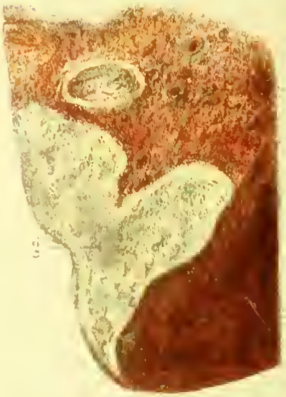

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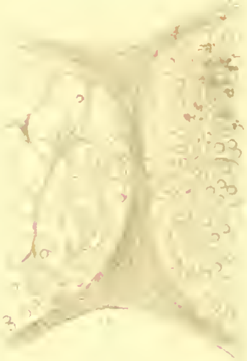

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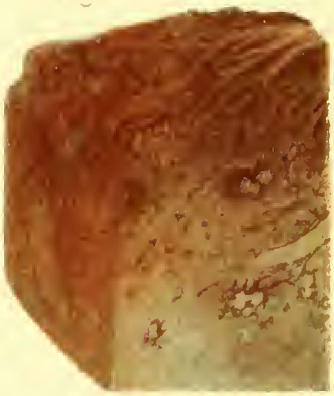

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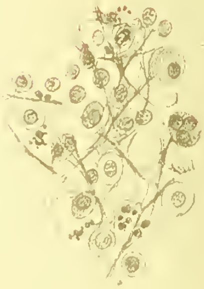

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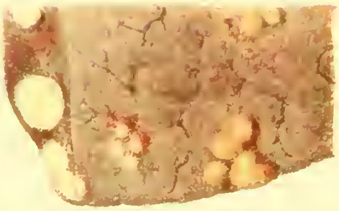

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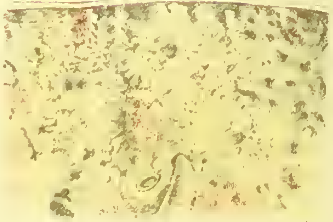


MEDICO-CHIRURGICAL SOCIETY

PLATE XXVIII.

Fig. 1.—Alveolar Pneumonia in a Drinker (half nat. size). Surface of section of part of the lung thus affected. The yellow parts are the result of the presence of pus corpuscles and fatty granules in the pulmonary alveoli. The grey or black spots are the result of infiltration with blood pigment.

Fig. 2.—Alveolar Pneumonia in a Case of Albuminuria (half nat. size). External surface and surface of section of a part of the lung at the limit of the change. The parenchyma, inflamed, friable, and whitish, is sharply outlined from the healthy elastic rosy-coloured tissue adjacent to it.

Fig. 3.—Caseous and Scrofulous Alveolar Pneumonia (half nat. size). Surface of a vertical section of the lung. This surface is marbled with yellow, red, and black. The red spots are the first degree of the change, the yellow spots the second degree; whilst the black spots are less numerous, and are due to infiltration with blood pigment. *c c*, excavations seated in the centre of some pneumonic spots; *b*, bronchi; *g*, pigmented lymphatic glands; *a*, section of the pulmonary artery.

Fig. 3′.—Microscopic section perpendicular to the external surface of the preceding lung; *s*, pleura; *v v*, vessels; *a a*, alveoli filled with inflammatory exudation; *p*, pigment (55 diam., after maceration in chromic acid).

Fig. 3″.—Two adjoining pulmonary alveoli; *t t*, intra-alveolar fibrous tissue; *c c*, young spherical cells filling the alveoli (250 diam.).

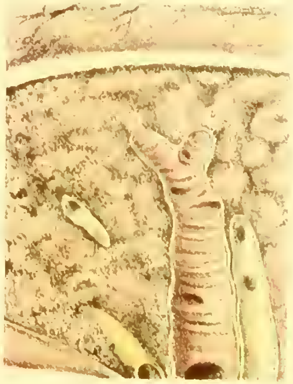
Fig. 3‴.—The same cells more highly magnified. Some have two or three nuclei.

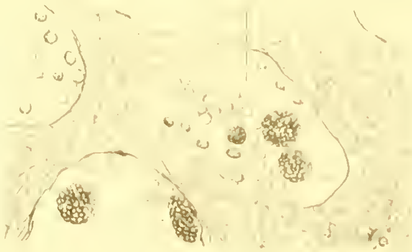
Fig. 4.—Diabetic Pneumonia (half nat. size). Sectional surface of a part of the lung (lower lobe) from a diabetic patient; *g*, patch of pneumonia with slight retraction; *u u*, other points diseased and with a central excavation; *v v*, vessels; *p*, congested parenchyma.

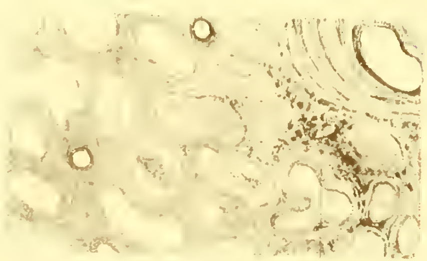
Fig. 5.—Metastatic Abscesses of the Lung (nat. size). These abscesses present the peculiarity that they are circumscribed by a circle of injection or even blood infiltration of the parenchyma, that they are of small size, and are especially situated near the surface of the organ.

Fig. 5′.—Pus corpuscles from the above abscess.

Fig. 6.—Metastatic Gangrene of the Lung. External surface and section of the lower lobe of a gangrenous lung, which is blackish and slaty; *a*, arterial branches dissected out by the softening of the parenchyma.







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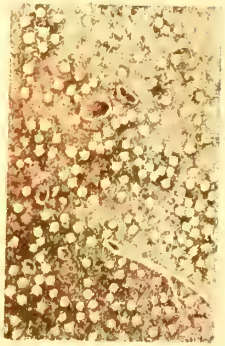

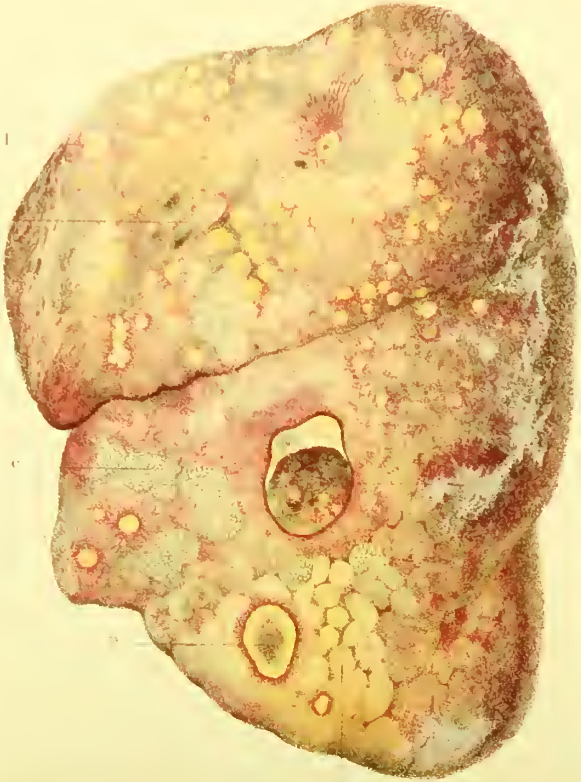

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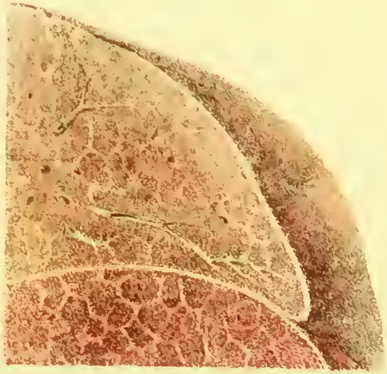

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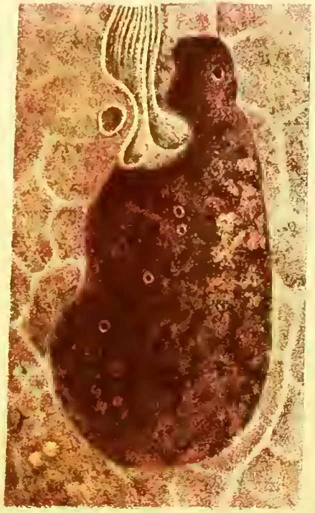

Fig. 4

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LEEDS & WEST-RIDING
MEDICO-CHIRURGICAL SOCIETY

PLATE XXIX.

Fig. 1.—So-called Caseous Pneumonia (half nat. size). External surface of left lung, on which are seen—1°, several cavities perforated, or on the point of perforation, *p p*; 2°, patches of pulmonary emphysema, *e e*; 3°, diseased yellow lobules, *l l*. The pleura covering this surface is thickened, and whitish in colour.

Fig. 2.—Sclerous or Chronic Interstitial Pneumonia (half nat. size). Part of the lung at the limit of the upper and middle lobes. The parenchyma is smooth and resistant to the finger. *c c*, thickened interlobular septa.

Fig. 3.—Sclerous or Chronic Interstitial Pneumonia (nat. size). Part of the upper lobe of the right lung of a patient who had had attacks of intermittent fever. External surface and section, in which are seen an indurated greyish pigmented parenchyma; *b*, dilated bronchus; *a* and *v*, artery and vein.

Fig. 3′.—Microscopic section of the above lung (40 diam.); the alveolar septa are thickened, and the alveoli completely obliterated in several places; *v v*, vessels; *p*, pigmentary infiltration.

Fig. 3″.—Microscopic section of the same (250 diam.); *a a*, alveoli containing fat globules and epithelial cells, some of which are more voluminous and granular; *c*, septum thickened and infiltrated with nuclei and rounded cells (embryoplastic cells).

Fig. 4.—Sclerous or Chronic Ulcerative Pneumonia (nat. size). Sectional surface of part of the lung variously coloured, somewhat granite-like. The diseased parenchyma is firm, solid, resistant, but less elastic than a cirrhosed liver. In the centre is a large cavity, *u*, into which opens a bronchus, *b*, and vessels, *v v*; *c c*, interlobular septa.

Fig. 5.—Pulmonary Tuberculosis (nat. size). Section of a part of the lung infiltrated with grey granulations, *g g*.

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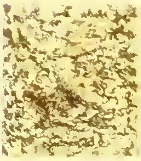

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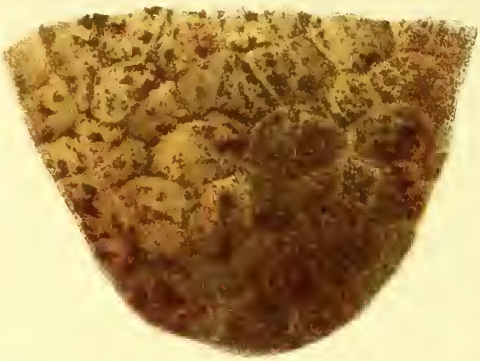

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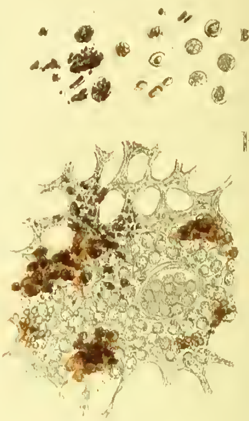

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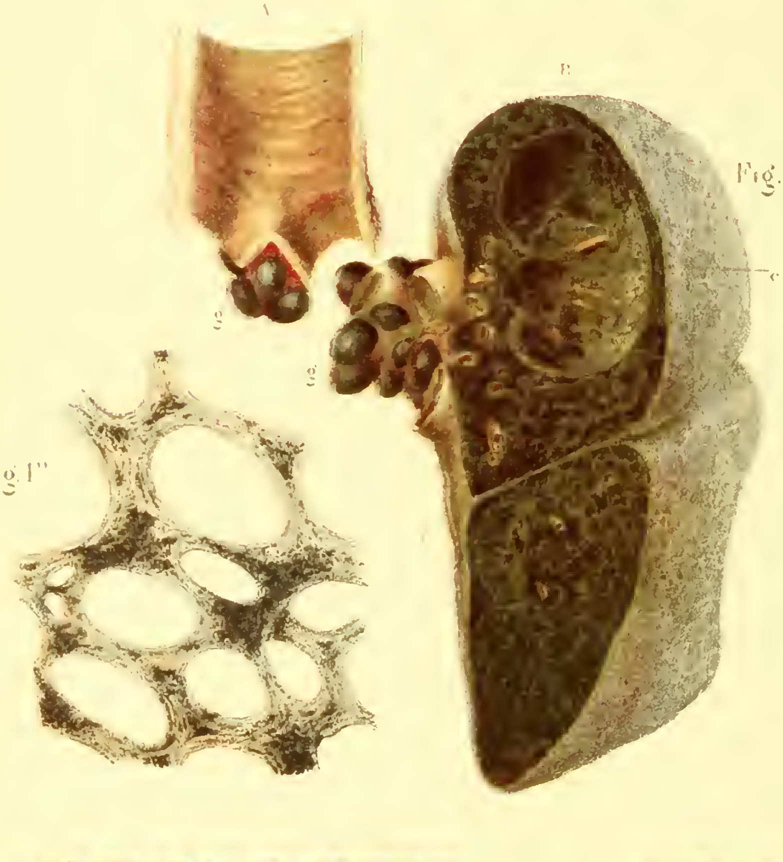

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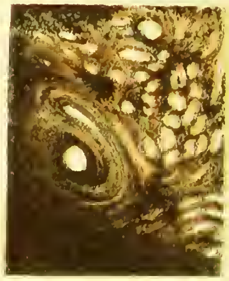

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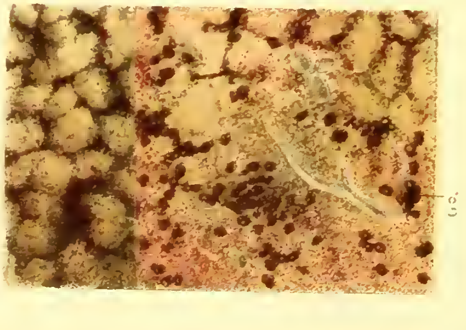

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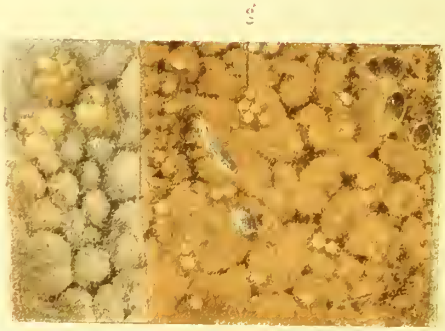


LEEDS & WEST-RIDING
MEDICO-CHIRURGICAL SOCIETY

PLATE XXX.

Fig. 1.—TRACHEO-BRONCHITIS AND PNEUMONIA FROM ANTHRACOSIS (half nat. size). A, lower part of the trachea, the mucous membrane of which is red, injected, and desquamating. B, vertical section of the left lung, altered by the presence of carbon dust in the parenchyma. The lung, indurated and coloured black, presents a large excavation at C. There are nowhere any tubercular granulations. The bronchial glands, *g g*, are infiltrated with carbon dust.

Fig. 1′.—Microscopic section of the above lung, the alveolar septa, diminished in size or completely effaced, are the seat of the carbonaceous material (50 diam.).

Fig. 1″.—Microscopic section from a part less indurated. The dimensions of the alveoli are in part maintained; their thickened walls show particles of carbonaceous material infiltrating their tissue (150 diam.).

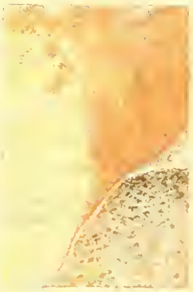
Fig. 2.—MICROSCOPIC DRAWING OF A BRONCHIAL GLAND AFFECTED WITH ANTHRACOSIS. A, particles of carbon occupying especially the connective tissue of the gland. B, isolated particles and some cells containing charcoal dust.

Fig. 3.—PULMONARY TUBERCULOSIS IN AN ALCOHOLIC (nat. size). External surface and section of a lung infiltrated with tubercular granulations, *g*, scanty and greyish; pigmentation in the interstices of the lobules.

Fig. 4.—PULMONARY TUBERCULOSIS (nat. size). External surface and section of a lung infiltrated with tubercular granulations, *g*, stained black by blood pigment.

Fig. 5.—PULMONARY MELANOSIS (nat. size). Part of lung strewn with black spots formed of pigment. The organ comes from a patient several of whose organs were affected with melanosis. (See the Liver, Plate IX. Figs. 3, 3′, and 3″.)

Fig. 5′.—Sectional surface of the same organ with melanotic spots.



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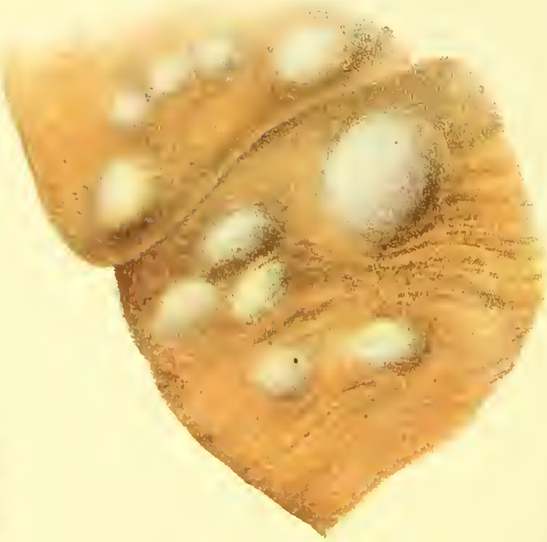

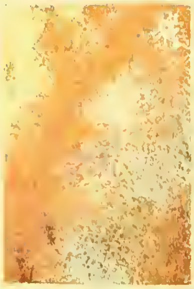

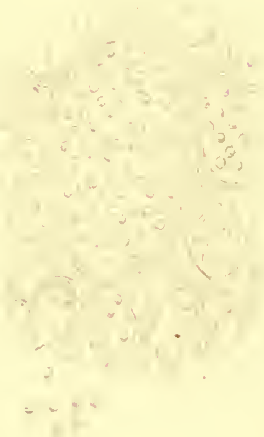

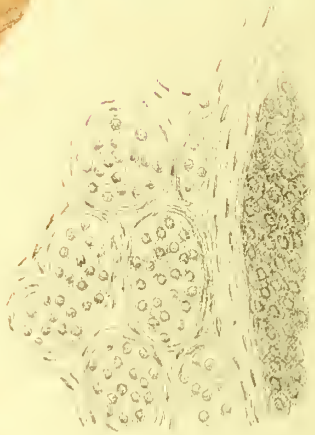

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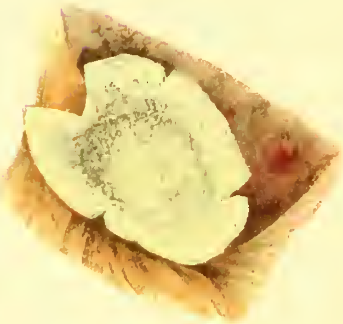

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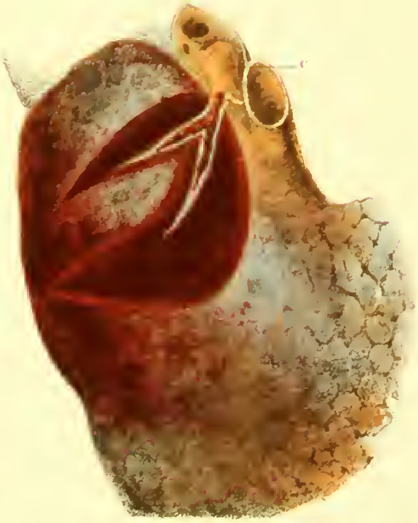

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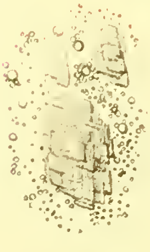

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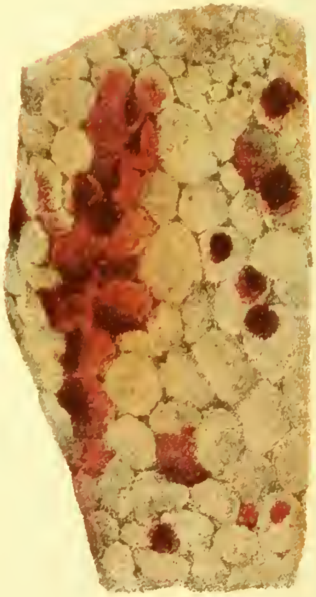

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LEEDS & WEST-RIDING
MEDICO-CHIRURGICAL SOCIETY

PLATE XXXI.

Fig. 1.—Melanotic Sarcoma of Lung (two-thirds nat. size). Part of the lung, the middle and lower lobes, strewn with blackish nodules composed of elongated fusiform cells containing numerous pigment granules. See Plate V., Figs. 5 and 5′, for a peritoneal sarcoma from the same patient.

Fig. 2.—Pulmonary Apoplexy (half nat. size). Part of the lung, of which a prominent and black part is infiltrated with blood (patch of apoplexy). The branch of the pulmonary artery adjoining this hæmorrhagic patch is obstructed by a fibrinous coagulum, bifurcated at one extremity.

Fig. 3.—Scattered Hæmorrhages in the Lung from a case of Phosphorus Poisoning (nat. size). Part of the lung with its posterior surface strewn with hæmorrhagic spots. The liver and several other organs were affected with fatty degeneration.

Fig. 4.—Hæmorrhagic Pleurisy (three-fourths nat. size). Visceral pleura (in region of pericardium) covered by a vascular false membrane which had given rise to an extravasation of blood.

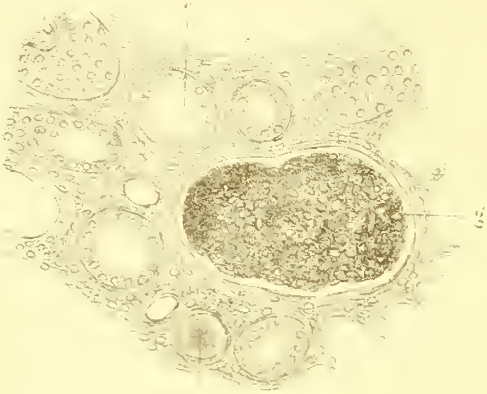
Fig. 4′.—Part of the diaphragmatic pleura of the same patient similarly affected.

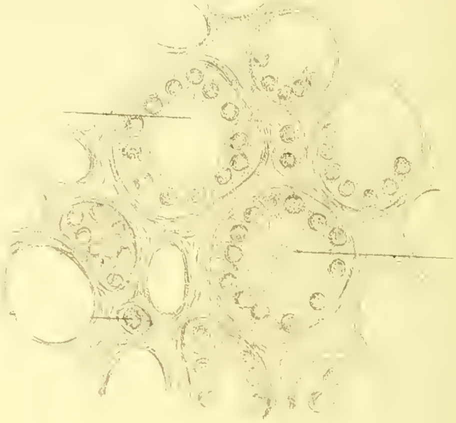
Fig. 5.—Cholesterine Cyst (half nat. size). Part of the diaphragm seen from its convex surface, to which adheres a pouch filled with a grumous yellowish magma composed of crystals of cholesterine and fat.

Fig. 5′.—Crystals of cholesterine and fat-granules from the contents of the above cyst (200 diam.).

Fig. 6.—Carcinoma of Pleura. Microscopic section of a cancerous granulation on the surface of the lung (350 diam.).

Fig. 6′.—Microscopic section of the central part of a larger granulation which has the same structure as the preceding.





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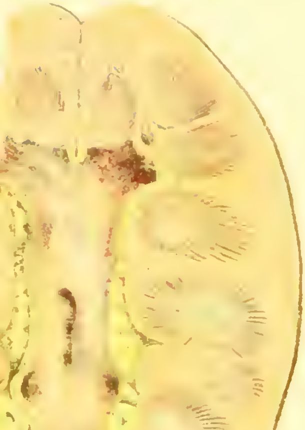

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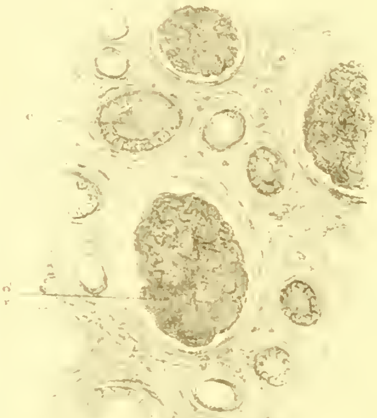

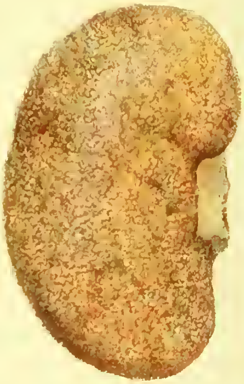

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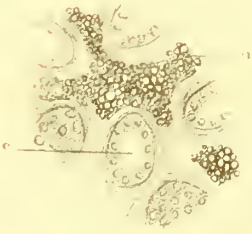

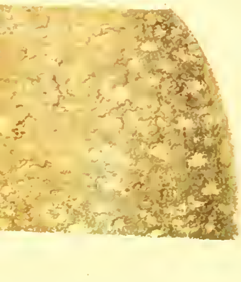

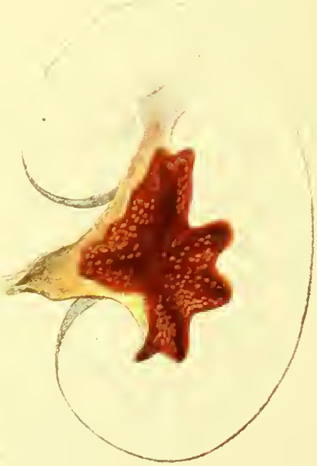

Fig. 1

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PLATE XXXII.

Fig. 1.—Scarlatinal Nephritis (half nat. size). Sectional surface of one of the kidneys, the cortical substance of which presents a brownish yellow coloration, whilst the calyces and pelvis are the seat of blood extravasation.

Fig. 2.—Catarrhal Nephritis in a case of Typhoid Fever (half nat. size). The kidney is voluminous; the calyces and pelvis present small ecchymotic spots; the cortical substance is soft and slightly yellowish.

Fig. 2′.—Microscopic section of above organ (250 diam.). *g*, glomerulus; *c*, uriniferous tubule, the cells of which are slightly cloudy; *t*, connective tissue strewn with elongated nuclei; *v*, vessel.

Fig. 3.—Catarrhal Nephritis in a case of Cholera (385 diam.). Microscopic section of a kidney, the epithelial cells of which are cloudy and granular; *c*, tubule lined with epithelial cells thus altered.

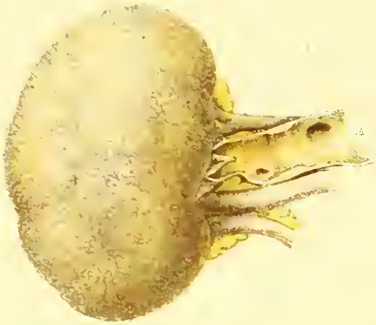
Fig. 4.—Metastatic Nephritis (nat. size). External surface of a kidney, the cortical substance of which presents a pale greyish tint and yellowish spots, produced by granular masses, which especially occupy the vessels.

Fig. 4′.—Microscopic section of the above kidney (170 diam.); *m*, thickened connective tissue network with fatty granules; *c*, uriniferous tube; *v*, vessel containing a fatty plug.

Fig. 5.—Sclerous or Interstitial Nephritis (half nat. size). The entire kidney, the surface of which is injected and strewn with miliary granulations of nearly uniform size.

Fig. 5′.—Microscopic section of the same organ, the fibrous bands of which are thickened and retracted (250 diam.); *g*, glomeruli; *c*, tubes with gelatinous exudation.

Fig. 2



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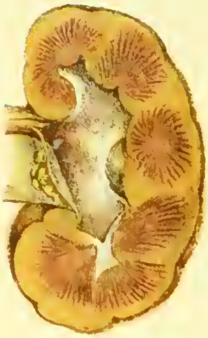

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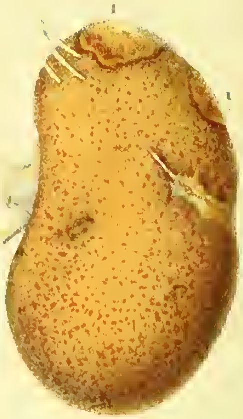

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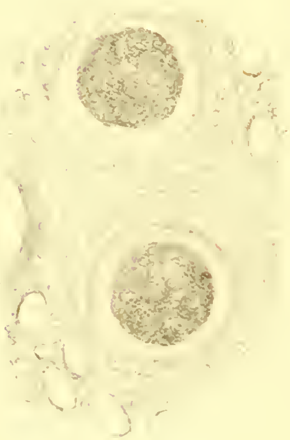

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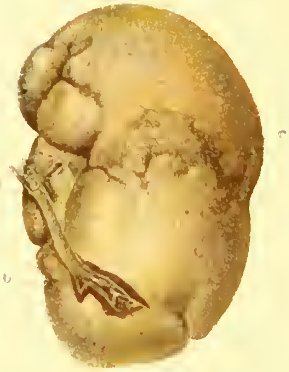

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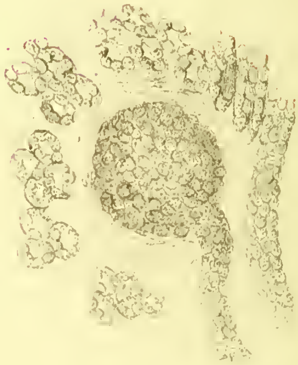
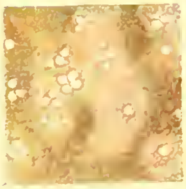


Fig. 4



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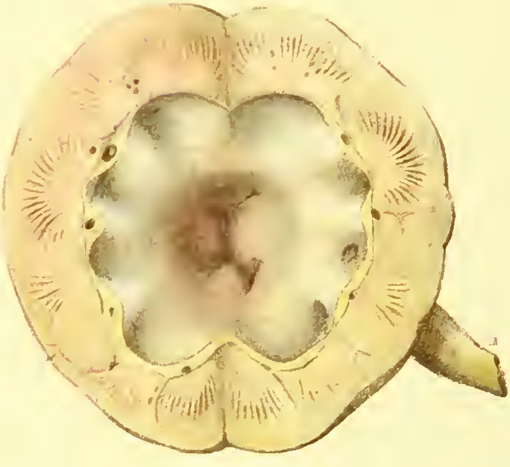

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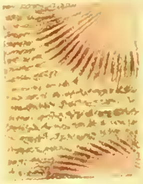

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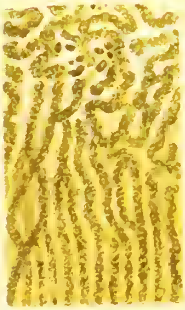

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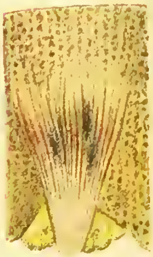

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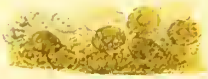

PLATE XXXIII.

Fig. 1.—Interstitial Nephritis in an Infant affected with Hereditary Syphilis (nat. size). One half of the kidney, the cortical substance of which, firm and indurated, presents a slight degree of discoloration.

Fig. 1′.—Microscopic section of the same kidney, in which one of the glomeruli is circumscribed by connective tissue, thickened, and strewn with cells and elongated nuclei. Several tubes together near it are surrounded by the same substance.

Fig. 2.—Interstitial Nephritis, with Changes in the Renal Arteries and Arterial System (half nat. size). An entire kidney, notably diminished in volume, the external surface granular, and the section shewing marked atrophy of the cortical substance. The artery distributed to it is enlarged and its walls hypertrophied.

Fig. 3.—Nephritis Secondary to Narrowing of the Orifice of the Ureters by a Utero-vesical Cancer. A kidney divided, so as to show the pelvis dilated and the calyces almost entirely obliterated. The parenchyma of the organ, especially the cortical substance, is smooth, indurated, yellowish, and atrophied.

Fig. 3′.—Microscopic section of the same kidney (250 diam.). Two glomeruli circumscribed and atrophied by fibrous tissue strewn with cells and embryonic nuclei. In the neighbourhood of one of them is a perpendicular section of some canaliculi deprived of epithelium.

Fig. 4.—Nephritis Secondary to Cystitis (nat size). Part of the external surface of a kidney, upon which are seen small whitish purulent granulations surrounded by large injected vessels.

Fig. 5.—Renal Infarction (Second stage) (half nat. size). An entire kidney, with three yellowish wedge-shaped infarcts buried in the substance. The renal tissue around the infarcts of violet colour. The corresponding vessels are obstructed.

Fig. 6.—Renal Infarct (Third stage) (half nat. size). An entire kidney, one of the surfaces of which presents several cicatricial depressions, resulting from the absorption of part of the parenchyma. One of the arterial branches, *b*, of the organ is obstructed by an old and adherent clot.

Fig. 7.—Pigmentation of the Kidney (nat. size). A part of the kidney, the cortical substance of which is of bronze colour, and the pyramidal part, towards its centre, the seat of a blackish spot.

Fig. 7′.—Microscopic drawing of the same organ, to show the tubules which are the seat of the pigmentary coloration.

Fig. 7″.—Epithelial cells of one of the tubules of the same kidney, infiltrated with pigment (200 diam.).

Fig. 8.—Alcoholic Steatosis of the Kidney (half nat. size). Part of the kidney, the cortical portion of which is discoloured, slightly yellowish, and rather thickened than atrophied.

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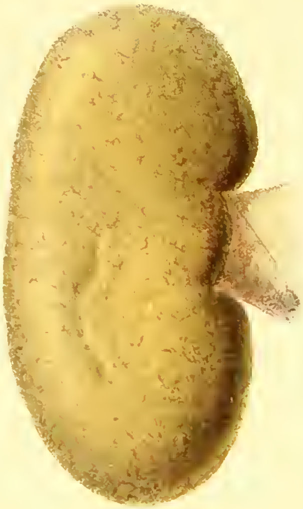
Fig. 3



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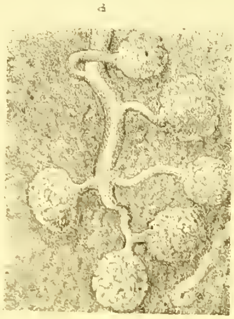

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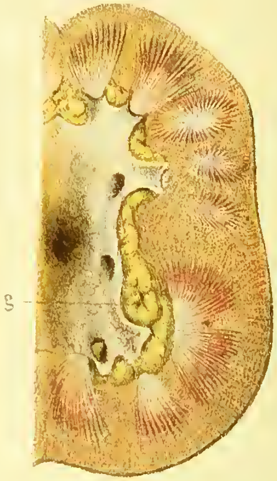

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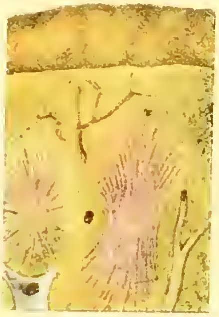

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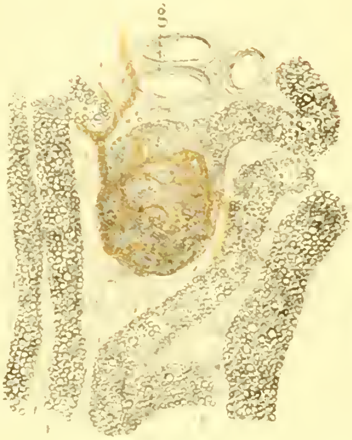

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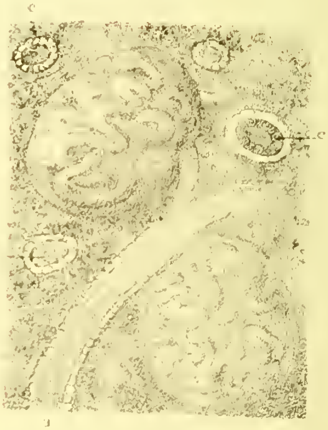

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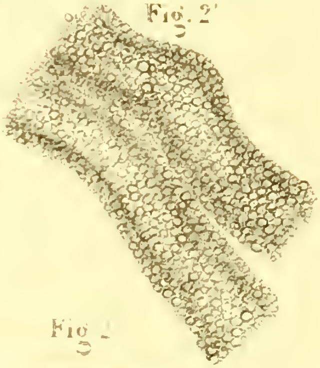

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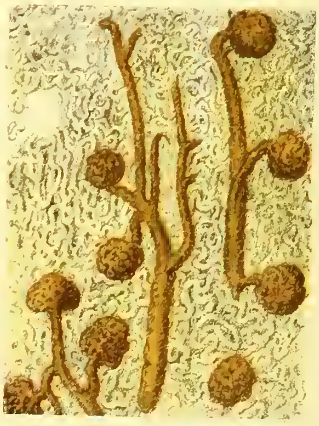

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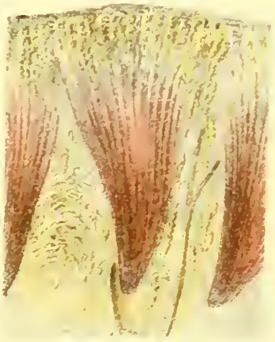

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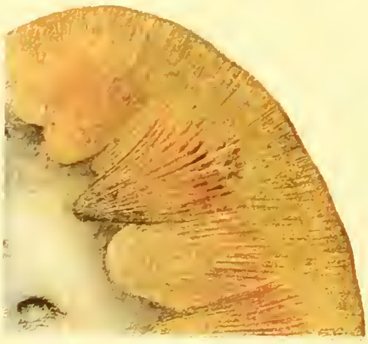

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PLATE XXXIV.

Fig. 1.—Alcoholic Steatosis (Fatty Degeneration) of the Kidney (half nat. size). Sectional surface in the middle of a kidney which is fattily degenerated. The Malpighian pyramids are slightly discoloured, and the cortical substance presents a yellowish tint dotted with blood. *g*, fatty deposit at the junction of kidney and pelvis.

Fig. 1′.—Microscopic section of the same organ in the fresh condition; *g*, Malpighian glomerulus, which is healthy, and a tubule the epithelium of which is in a state of fatty degeneration; *t t*, tubules filled with epithelial cells altered by fatty degeneration or destroyed. (120 diam.)

Fig. 2.—Phosphoric Steatosis of the Kidney (nat. size). Sectional surface of part of the kidney, the cortical substance of which is swollen yellowish, and dotted with red by the injection of the Malpighian glomeruli.

Fig. 2′.—Two uriniferous tubules from the kidney represented in Fig. 2. These tubules are filled with fat granules infiltrating their epithelial elements. (350 diam.)

Fig. 3.— Lardaceous Degeneration (Leucomatosis, or Waxy Degeneration) of the Kidney (half nat. size). The entire kidney, slightly flattened on both surfaces, smooth, greyish, waxy, with small stellate injections on the surface.

Fig. 3′.—Surface of perpendicular section of the same organ, the medullary substance of which has a reddish tint, whilst the cortical presents a salmon yellow colour.

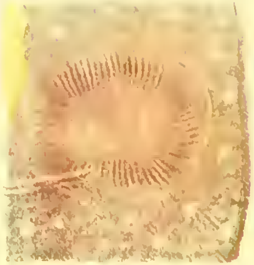
Fig. 3″.—Microscopic section of the same kidney treated with watery solution of iodine. The arterial branches and the Malpighian glomeruli are coloured red. (40 diam.)

Fig. 3‴.—Another microscopic drawing of the same kidney not treated with iodine. An arterial branch, *a*, the walls of which are thickened and transparent, with the glomeruli likewise altered. (50 diam.)

Fig. 4.—Lardaceous Degeneration (Leucomatosis) of the Kidney (nat. size). Surface of a perpendicular section of a kidney affected by this change. The medullary substance is of violet colour, the cortical greyish and silvery.

Fig. 4′.—Microscopic drawing of kidney seen in Fig. 4. *a*, arterial branch with glomeruli; the walls of the vessel are thickened and transparent owing to infiltration with albuminoid material. *c c*, perpendicular section of the renal tubules, the walls of which are similarly affected. (100 diam.)

Fig. 2



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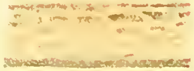

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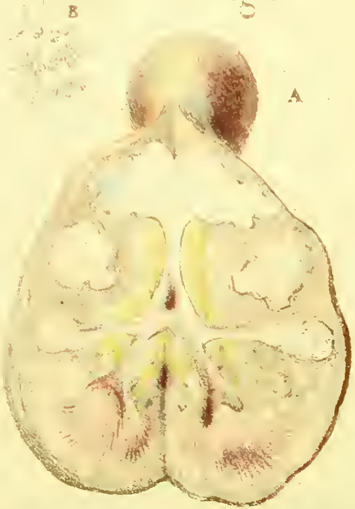

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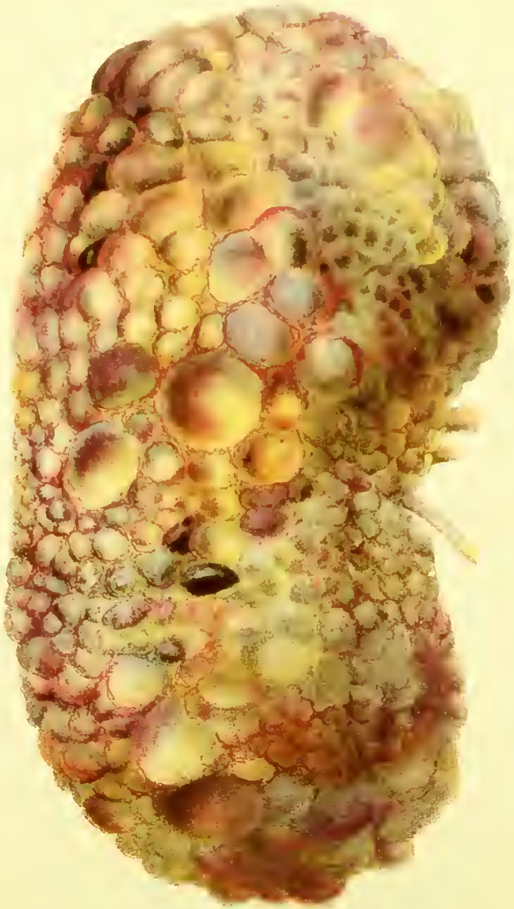

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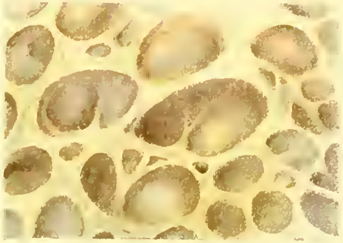

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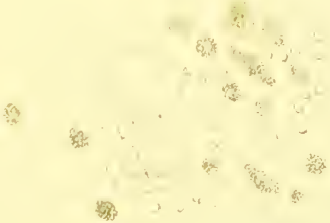

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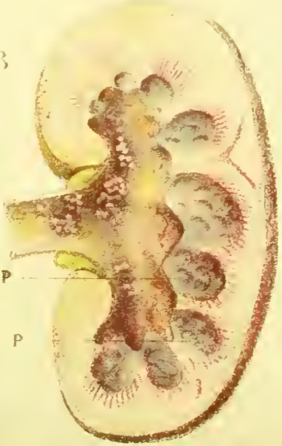

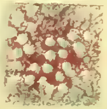

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PLATE XXXV.

Fig. 1.—Cystic Degeneration of the Kidney (half nat. size). An entire kidney, the substance of which is transformed into cystic pouches, from the size of a hemp-seed to that of a large nut. These cysts contain a fluid which is more or less turbid and of various colours.

Fig. 1′.—Surface of a section of the same organ (nat. size), on which are seen a number of empty cysts.

Fig. 1″.—Cholesterine plates, blood corpuscles, and cells of various kinds, for the most part granular, contained in the fluid from the kidney shown above.

Fig. 2.—Tuberculosis of the Kidney (nat. size). Sectional surface of a part of the kidney, the cortical substance of which presents disseminated greyish miliary tubercles.

Fig. 3.—Tuberculosis of the Urinary Passages (half nat. size). Median section of the kidney and pelvis. On the inner surface of the latter, and at the origin of the ureter, are small masses of miliary granulations circumscribed by a vivid injection. *p p*, ulcerated Malpighian pyramids, irregular in outline, and almost entirely destroyed by the softening of tubercular deposits.

Fig. 3′.—Part of the bladder of the same patient, on the surface of which are seen numerous tubercular granulations (nat. size).

Fig. 4.—Tuberculosis of the Urinary Passages with Caseous Deposits in the Kidney (half nat. size). Right kidney cut in two to show the pelvis and the pyramids. The calyces are narrowed and inflamed, and the pyramids of the lower two-thirds of the organ are transformed into a caseous mass, a sort of yellowish or whitish putty. A, a caseous cyst containing small rounded granular cells and crystals of cholesterine, B.

Fig. 4′.—Ureter of the same organ, the mucous membrane of which is ulcerated and almost entirely destroyed.

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PLATE XXXVI.

Fig. 1.—Tuberculosis of the Urinary Passages (from the same case as Plate XXXV., Figs. 4 and 4′). A lobulated cystic cavity representing the left kidney, the parenchymatous substance of which has completely disappeared; *u*, obliterated ureter.

Fig. 1′.—Bladder belonging to the same patient as the kidney represented in Fig. 1. The mucous membrane of the organ is everywhere ulcerated, with the exception of the base, which is smooth and fairly normal. (Half nat. size.)

Fig. 1″.—Part of the same bladder taken from *a*. On the surface of the mucous membrane are small ulcers circumscribed by yellowish deposit.

Fig. 2.—Fibroma of the Kidney (half nat. size). Sectional surface of a kidney with a small fibrous tumour in one of the Malpighian pyramids.

Fig. 3.—Vegetating Cystitis (half nat. size). *o*, neck of the bladder; *g*, cystic vegetations scattered in the neighbourhood of the orifice and circumscribed by a vivid injection.

Fig. 4.—Calculous Cystitis and Vegetating Cystic Pyelitis (half nat. size). Bladder containing two uric acid calculi. The mucous membrane, ecchymosed and thickened, presents a great number of irregularities. (Bladder hypertrophied.)

Fig. 4′.—Median section of one of the kidneys of the patient to whom the bladder in Fig. 4 belonged. The mucous membrane of the pelvis injected and strewn with numerous small cystic vegetations. (Half nat. size.)

Fig. 4″.—External surface of the same kidney. The yellow colour is due to a slight degree of fatty degeneration.

Fig. 5.—Vegetating or Cystic Ureteritis (half nat. size). A great part of a ureter, the mucous membrane of which is strewn with small vegetations, most of which have undergone a cystic change. *a*, one of the cysts of natural size seen in profile.

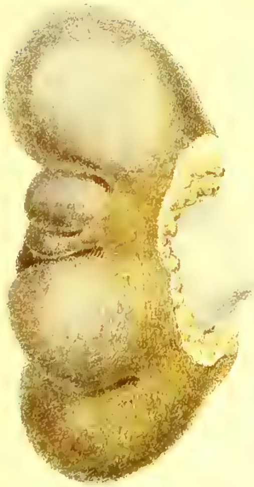
Fig. 6.—Hypertrophy of the Middle Lobe of the Prostate, forming a Valve to the Bladder (half nat. size). Behind the orifice of the bladder is a thick projecting swelling at *v*, forming a sort of valve which prevents the outflow of the urine. The base of the bladder is covered by hypertrophied and uneven mucous membrane. (Bladder hypertrophied, sacculated.)

Fig. 6′.—Elongated elements (fibro-cellular) and small granular cells from the preceding tumour.

Fig. 7.—Colloid Cancer of the Bladder (half nat. size). The entire bladder, hypertrophied, but not enlarged, presents on its inner surface, behind the base, a transparent colloid mass, and towards the circumference of the mass are numerous hypertrophied papillæ.

Fig. 7′.—One of these papillæ seen with a magnifying power of 30 diameters.

Fig. 1



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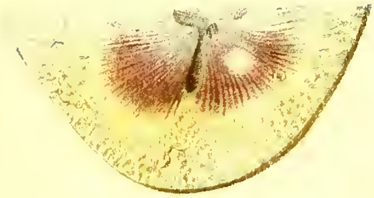

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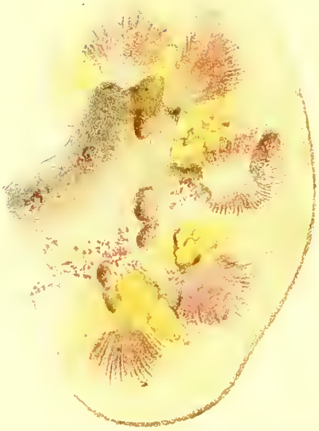

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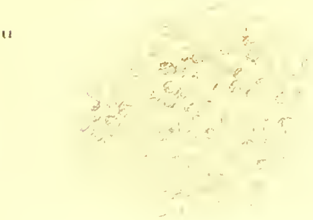

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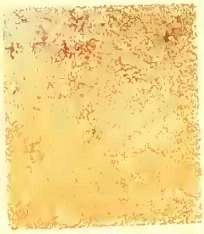

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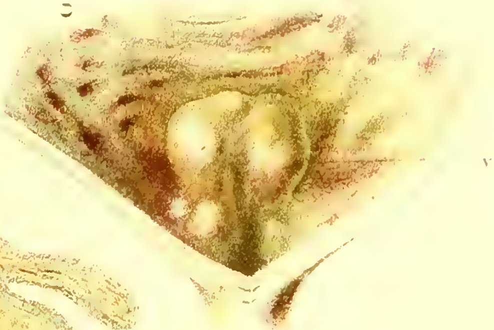

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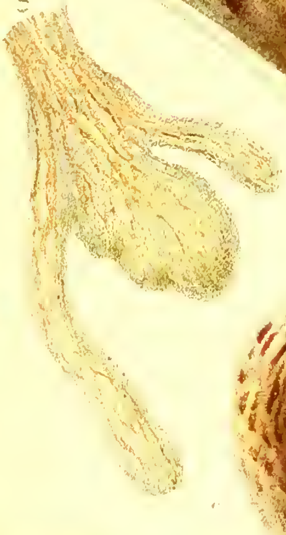

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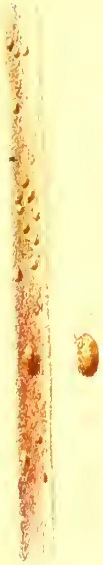

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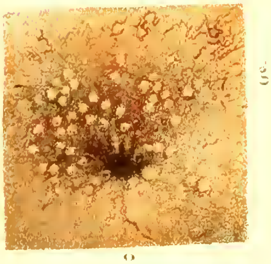

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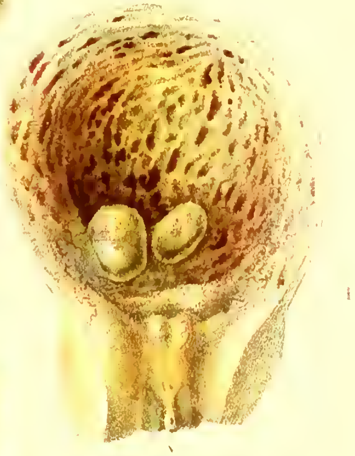

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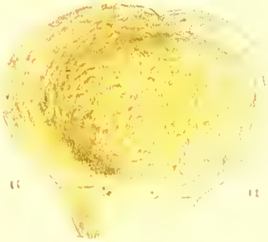

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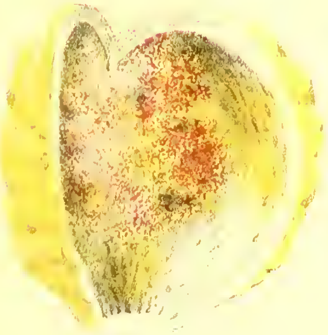

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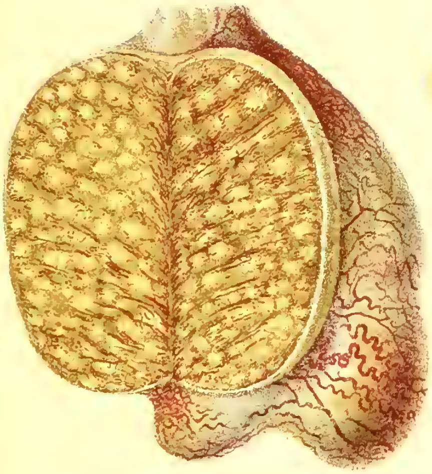

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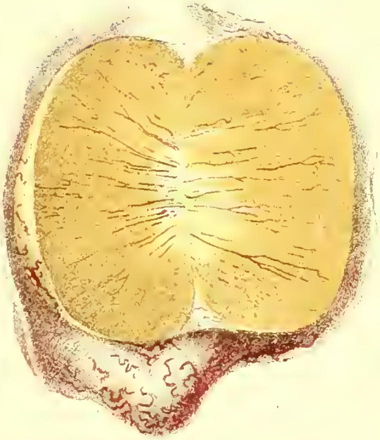

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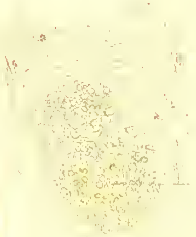

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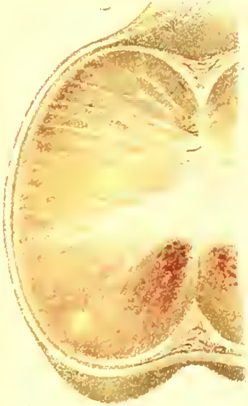

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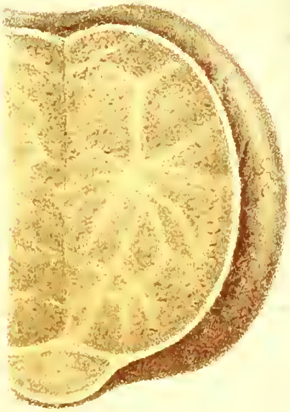

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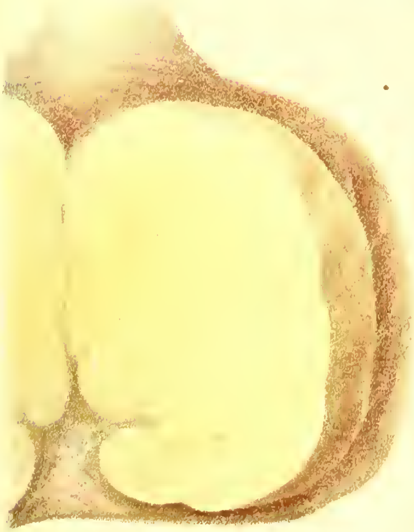

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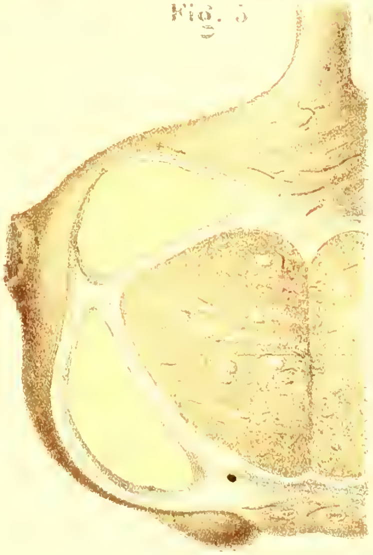

CHIRURGICAL SOCIETY

PLATE XXXVII.

Fig. 1.—Variolous Orchitis (nat. size). Entire testicle swollen; cut through at its lower border, so as to show the two halves of the parenchyma. It is indurated and friable, and presents on section a large number of yellowish spots or slightly prominent granulations, separated by a greyish tissue, which is strongly injected. The epididymis, *e*, is voluminous and vascular, and also diseased.

Fig. 1′.—Microscopic section across one of the seminiferous tubules of the preceding organ; *e*, epithelial layer lining the tubule; *t*, connective tissue network in its vicinity thickened by the formation of young cell elements in the interior of its meshes, showing that there is undoubted inflammation.

Fig. 2.—Syphilitic Orchitis with Gummatous Deposits (nat. size). Testicle cut through at its centre, and nearly half of it cut away. The organ is indurated, not friable; is noticeable for the presence of gummatous deposits and whitish tracts, due to thickening of the fibrous septa, for, like the latter, they converge towards the *corpus Highmorianum;* *a*, adhesion of the tunica vaginalis to the thickened tunica albuginea.

Fig. 3.—Syphilitic Orchitis without Gummata (nat. size). Part of the testicle incised along its convex border; *a*, adhesions uniting the tunica vaginalis to the tunica albuginea. Firm and elastic, the parenchyma of the testis is traversed by whitish fibrous septa, between which are found altered seminiferous tubules.

Fig. 3′.—Microscopic section perpendicular to one of these tubules. Its channel is filled with fat granules, *g;* its walls are notably thickened by the addition of newly-formed fibrous tissue. The alteration is similar to that in interstitial hepatitis.

Fig. 4.—Gummatous Orchitis (nat. size). Testicle cut in half; *a*, adhesion of the tunica vaginalis and tunica albuginea; *g*, gummatous deposit replacing the substance of the testicle.

Fig. 4′.—Fat granules and crystals of margarine from the same deposit.

Fig. 5.—Tuberculosis of the Testicle (nat. size). The testicle is cut along its upper border; the incision passes through the epididymis, *e e*, which is transformed into caseous masses, in the midst of which can still be found tubercular granulations. These masses are in process of softening, they cause adhesion of the two layers of the tunica vaginalis, and have already begun to attack the more superficial layers and perforate them at *f* (fungus of testicle); *g*, tubercular granulations scattered through the thickness of the parenchyma of the testicle; *c*, vas deferens.

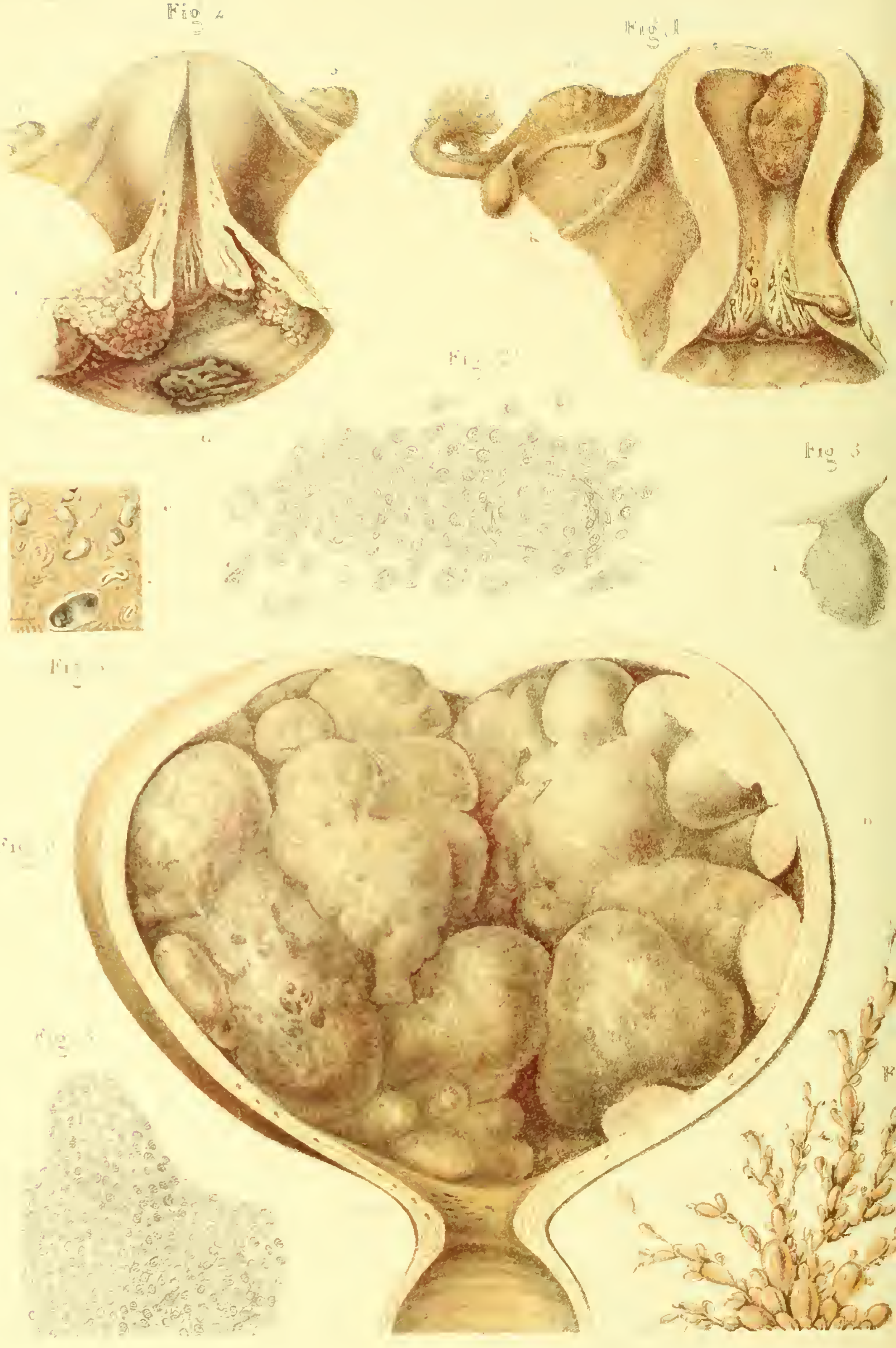

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PLATE XXXVIII.

Fig. 1.—Cystic Metritis (half nat. size). The entire uterus incised along its anterior surface in order to show the cavity. *p*, mucous cyst attached to the base of the organ. In the interior of the neck are glands rendered prominent by the retention of the products of their secretion. These glands, one of which, with a pedicle, projects across the orifice into the vagina, are those usually known as *ovula Nabothi*. *k*, small cysts developed on the surface of the Fallopian tube; *o*, ovary.

Fig. 2.—Pavement Epithelioma of the Uterus (half nat. size). The uterus partly incised lengthwise; *e*, a mammillated vegetation filling the vaginal cul-de-sac, and almost entirely covering the os tincæ; *u*, softening and ulceration of the vaginal mucous membrane; *o*, ovary.

Fig. 2′.—Epithelial cells of various shapes, and epidermic globes; *c*, a cell with multiple nuclei and a cavity in its substance.

Fig. 3.—Epithelioma of Uterus (half nat. size). Section of the uterus at its neck; *p*, normal papillæ projecting into one of the inequalities of the mucous membrane; *e e*, hypertrophied papillæ in process of epithelial change.

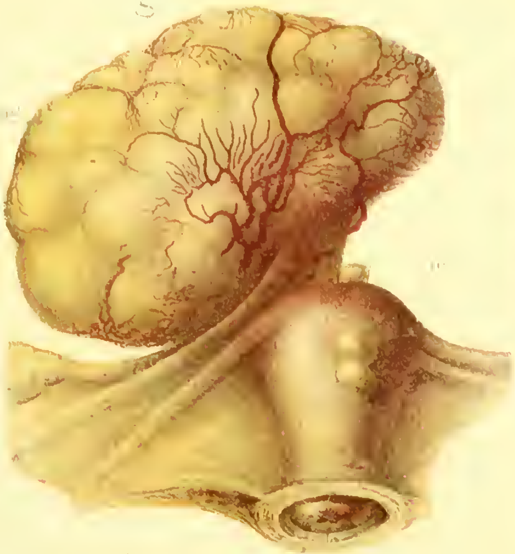
Fig. 3′.—One of the papillæ magnified 10 diameters.

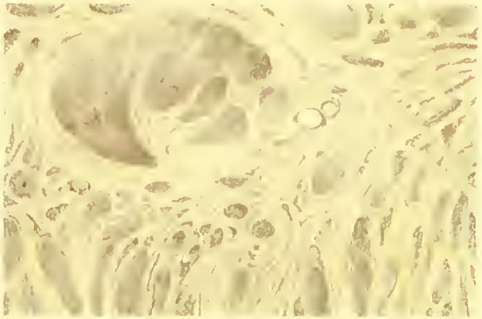
Fig. 3″.—Microscopic drawing of the same papillæ at *a* (250 diam.).

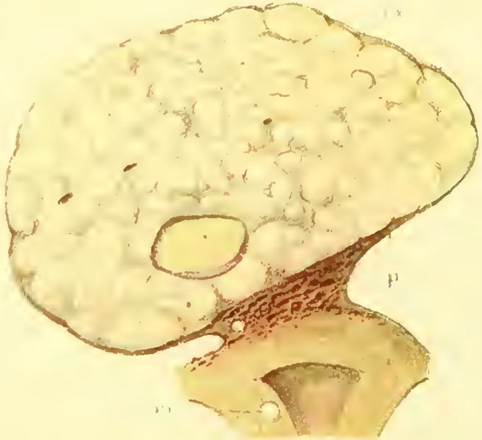
Fig. 4.—Multiple Cystoid Myxoma of the Placenta (or Hydatid Mole). The figure represents the top of some of the villosities of the chorion affected with multiple cysts. These villosities come from a much more voluminous mass, which was passed at the same time with a quantity of blood.

Fig. 5.—Myxoma of the Uterus (half nat. size). Entire uterus of large size, opened in front, presents on its inner surface, *n*, chestnut-like projections, greyish and brownish in colour, composed of scanty cell elements and an amorphous intermediate substance; *m*, neck of uterus, free from this change.

Fig. 1







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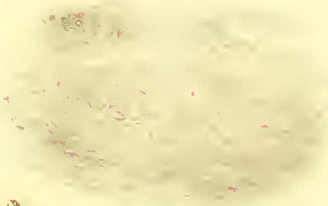

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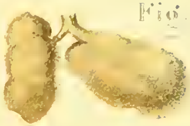

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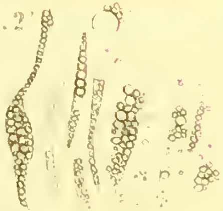

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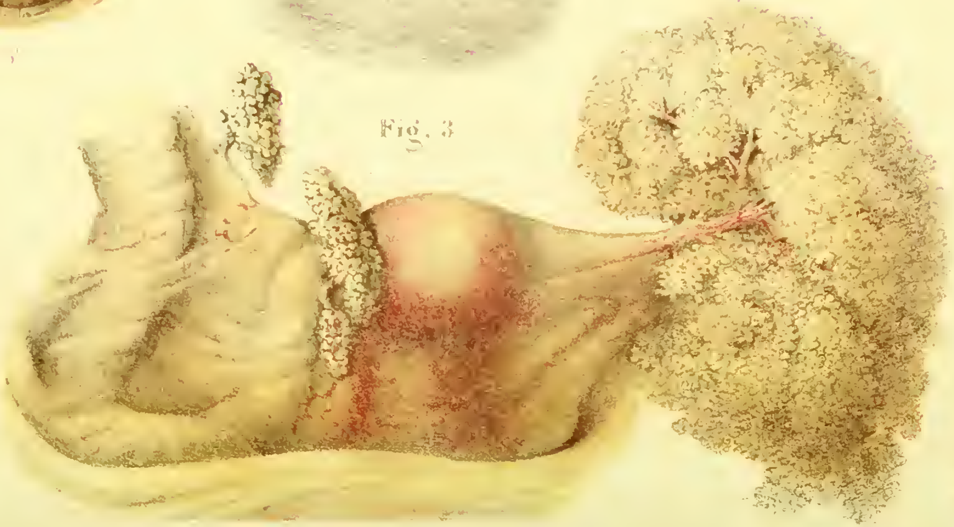

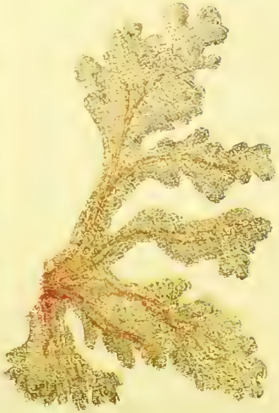

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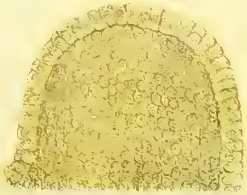

Fig. 5''

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PLATE XXXIX.

Fig. 1.—Myomas of the Uterus (Uterine Fibroids) (half nat. size). The whole uterus is drawn; *m m*, two fibroids, each the size of a cherry-stone; *m′*, a large fibroid, nodular and lobulated, projecting into the peritoneal cavity, and attached by an elongated pedicle to the body of the uterus at the fundus; *o*, os tincæ.

Fig. 1′.—Median section of the fundus uteri, and the tumour, *m*, attached to it; *p*, a sort of erectile tissue serving as a pedicle to the tumour; *m*, fusiform fibroid in the thickness of the wall of the uterus, close to the mucous membrane.

Fig. 2.—Microscopic section showing the fibrous framework of the myoma, *m′* (50 diam.).

Fig. 2′.—Microscopic drawing (250 diam.) of a part of the preceding tumour, in which are seen, in a connective tissue network, fibre cells, some arranged lengthwise, others cut across.

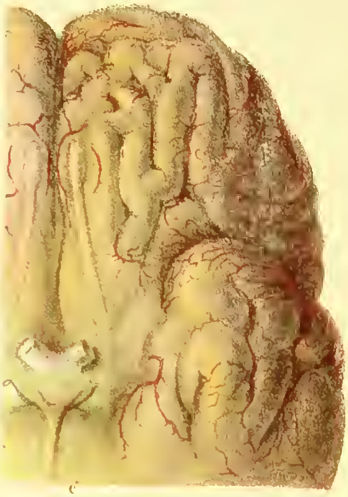
Fig. 2″.—Fibre cells which have undergone more or less complete fatty degeneration (350 diam.).

Fig. 3.—Cystic Myxoma of Peritoneum (half nat. size). The uterus, seen on its posterior surface, adheres on the left to loops of the intestine; on the right there is an arborescent vegetation on the posterior aspect of the Fallopian tube, terminated by villous projections; to the left there are two similar but smaller vegetations, growing from the surface of the broad ligament.

Fig. 3′.—Two of the swollen extremities of these vegetations with liquid contained in their substance.

Fig. 3″.—Several projections of villous form inserted on a common pedicle (15 diam.).

Fig. 3‴.—Extremity of one of these villous projections, covered with cylindrical epithelium (200 diam.).



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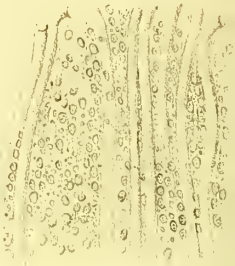

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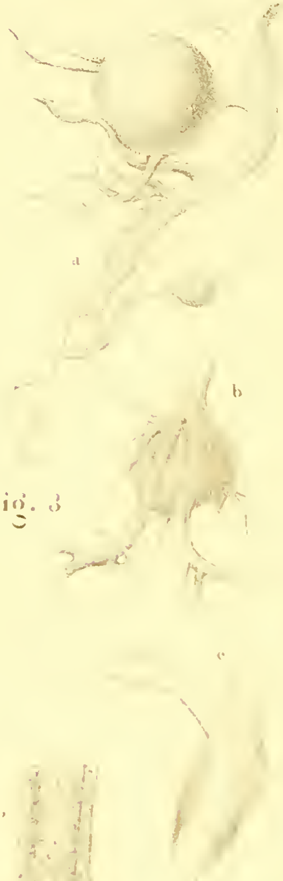

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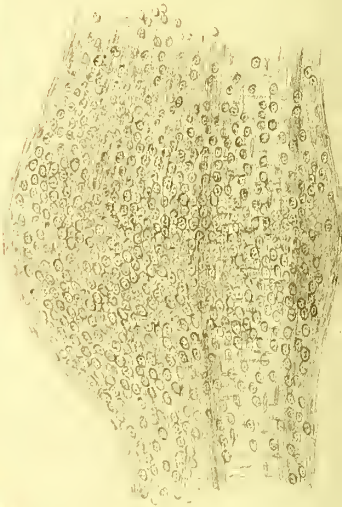

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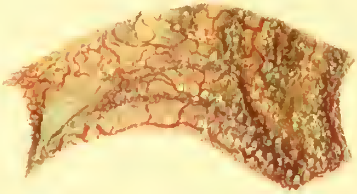

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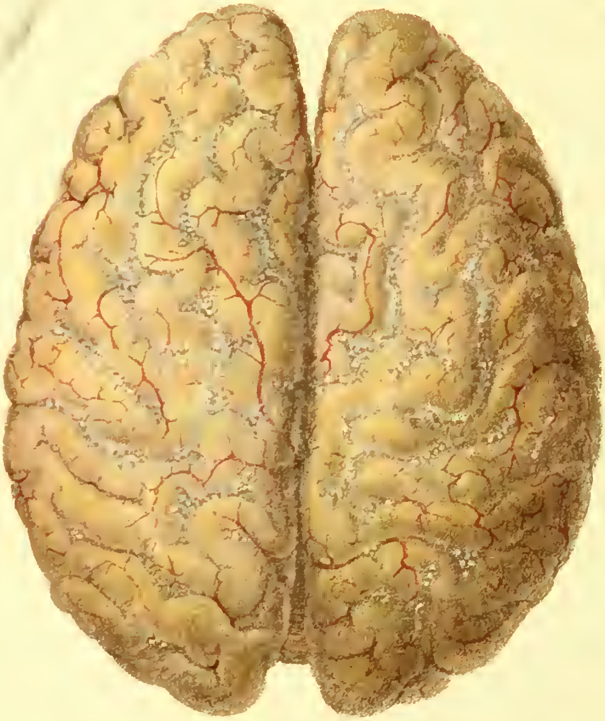

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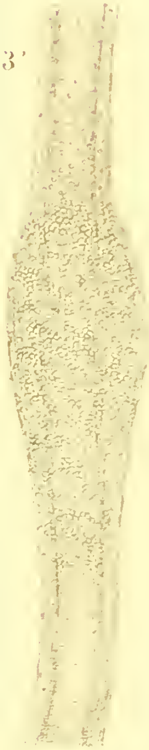

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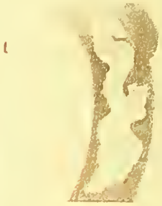

Fig. 4

Fig. 1'

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PLATE XL.

Fig. 1.—Alcoholic Meningitis (half nat. size). The convex surface of both cerebral hemispheres is covered with opaline membranes strewn with whitish spots or small patches of exudation on the thickness of the arachnoid. At some points there is an accumulation of cerebro-spinal fluid in the intervals between the atrophied convolutions. The membranes are readily detached from the convolutions, which are small, smooth, pale, and at the same time very firm.

Fig. 1′.—Perpendicular section of the pons and cerebellum, showing at *a* a circumscribed patch of inflammation. The nervous tissue is, at this point, altered in consistence, colour, and structure.

Fig. 2.—Tubercular Meningitis (half nat. size). Anterior half of the base of the brain, the meninges of which are soft, opaque, and thickened, and are strewn with greyish miliary granulations in their substance; in the neighbourhood of the fissure of Sylvius is a similar condition. *c*, third nerve, injected, and of greyish colour.

Fig. 2′.—Bottom of the fissure of Sylvius, which could not be shown in the previous drawing (nat. size).

Fig. 2″.—Microscopic drawing of the affected third nerve (220 diam.). Between the nerve tubes, in the connective tissue, are seen rounded cells, identical with those found in the walls of the vessels.

Fig. 3.—*a*, *b*, *c*, arterioles taken from the substance of the pia mater of the Sylvian fissure (20 diam.). The arterioles present swellings and nodulations, the so-called tubercular granulations.

Fig. 3′.—Another arteriole, seen with a higher power (150 diam.). It is evident that the small round cell elements which make up the granulation are seated in the external coat of the vessel, since they are covered by the lymphatic sheath.

Fig. 3″.—A similar arteriole (300 diam.). The outer coat of this vessel is infiltrated with young rounded cells, which, by their accumulation at one point, give rise to the granulation.

Fig. 4.—Section of a cerebral convolution of a child, with tubercular deposit in its substance.

PLATE XLI.

Fig. 1.—SYPHILITIC MENINGITIS (nat. size). Vertical section at the convexity of one of the cerebral hemispheres. The thickened dura mater, *d*, adheres to the subjacent membranes and to the brain-substance. This substance at *c* is greyish, of diminished consistence, and evidently inflamed.

Fig. 1′.—The dura mater covering the basilar process is the seat of a gummatous deposit, *g*.

Fig. 1″.—Microscopic drawing of this deposit. *a*, normal fibrous tissue; *b*, the same tissue infiltrated with young round cells, occupying, for the most part, elongated fusiform spaces; further, in the centre of the tumour, the network has almost completely disappeared; *c*, isolated cells, with a highly refractile nucleus (250 diam.).

Fig. 1‴.—Medulla oblongata, seen on its anterior surface (nat. size). At *t* there is a gummatous tumour the size of a cherry-kernel, developed in the substance of the meninges. This tumour is partly covered by the trunk of the basilar artery.

Fig. 2.—CRETACEOUS TUBERCLE OF THE LEFT OPTIC THALAMUS, SECONDARY SCLEROSIS. Only the corpora striata, optic thalami, &c., are drawn (half nat. size). The left optic thalamus cut into presents towards its central and lower part a rounded uneven mass of stony hardness.

Fig. 2′.—This mass isolated, and a fragment partially separated from it (nat. size).

Fig. 2″.—The medulla oblongata of the same seen from the front (half nat. size). The pyramid, *p*, corresponding to the altered optic thalamus, is thinner than that of the opposite side. (Atrophy from descending sclerosis.)

Fig. 3.—NEUROGLIC SARCOMA OR GLIOMA (half nat. size). The inner surface of the left hemisphere presents at the union of the anterior and middle thirds a greyish tint with slight swelling and marked injection of the convolutions and of the corresponding part of the corpus striatum. These changes in the cerebral substance are due to the existence of a new growth.

Fig. 3′.—Section of affected convolution. It has, like the surface of the hemisphere, a greyish tint, and at one point, *g*, very marked injection.

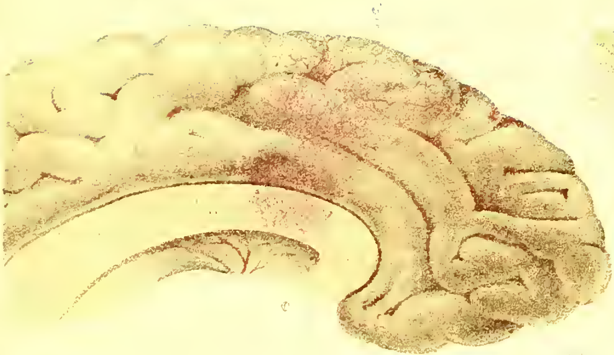
Fig. 3″.—Microscopic section at the very centre of the change (200 diam.). It is composed of reticulated tissue, in the meshes of which are free cells, which are rounded and of small size, and possess a nucleus and a small quantity of protoplasm. *v*, vessel filled with blood corpuscles.

Fig. 4.—FASCICULATED OR FIBRO-PLASTIC SARCOMA OF THE CORPUS CALLOSUM (half nat. size). Section of the centrum ovale of Vieussens. The upper surface of the corpus callosum and the neighbouring white substance are swollen, of greyish or reddish tint, and very vascular. To the left of the middle line this surface is strewn with brownish spots, produced by extravasations of blood resulting from the rupture of some of the numerous vessels situated at these points.

Fig. 4′.—Vertical section of the corpus callosum at its centre. This section shows that this part of the brain is thickened and altered throughout its entire thickness. It is of somewhat greyish tint, and is the seat of marked injection and of multiple hæmorrhagic spots.

Fig. 4″.—Microscopic drawing of the above change. It is formed by elongated and fusiform cells with tailed-out extremities. The nervous tissue has disappeared in this part for a certain distance owing to the pressure of these elements.

Fig. 3



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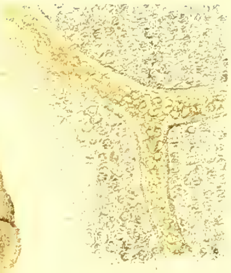

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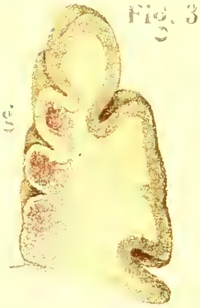

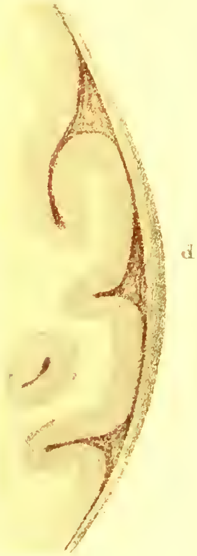

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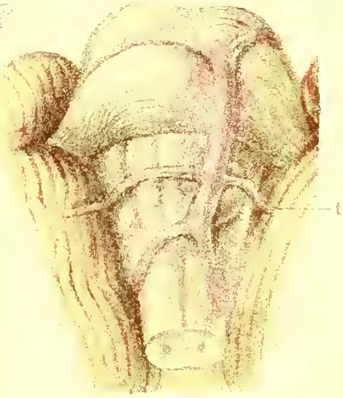

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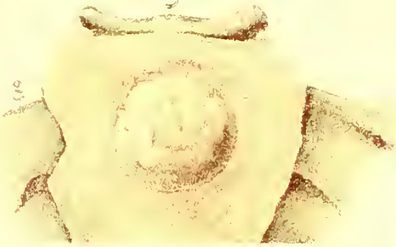
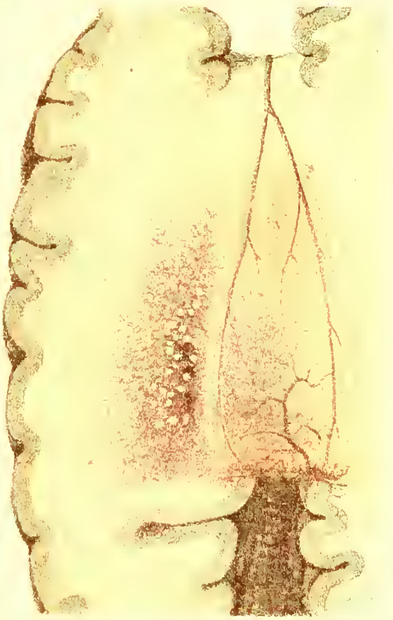


Fig. 4



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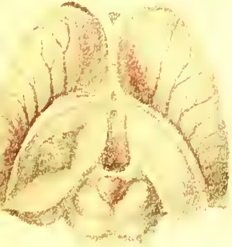

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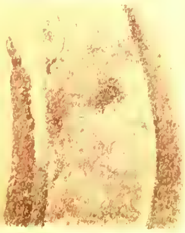

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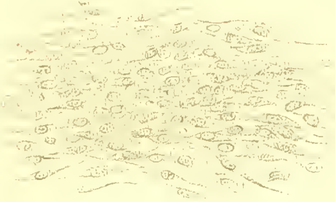

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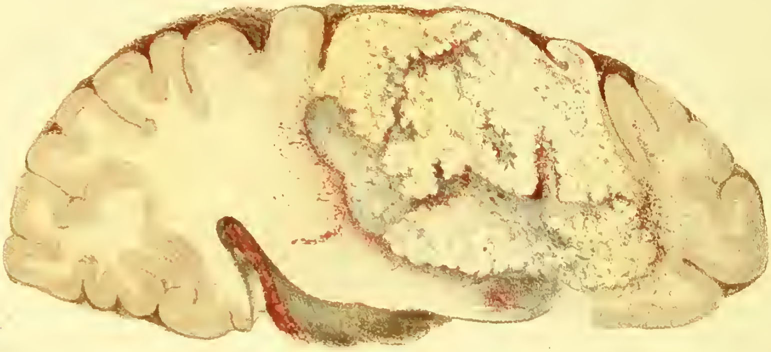
Fig. 2



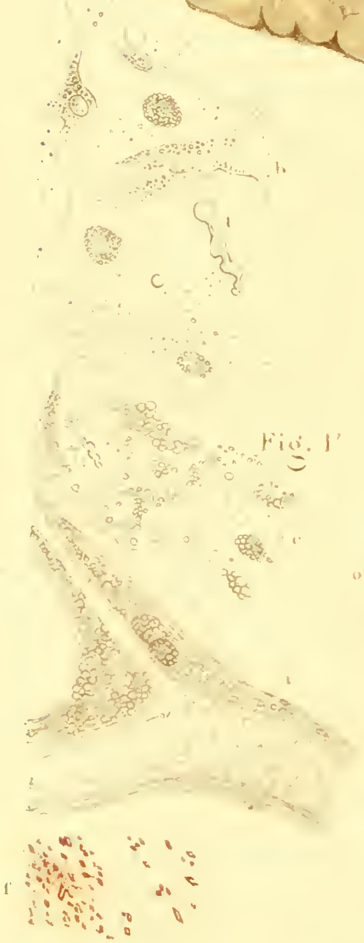


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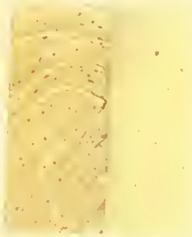
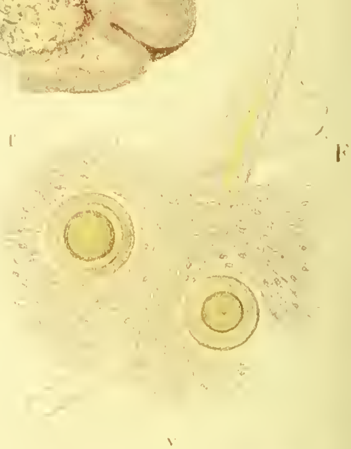
Fig. 6





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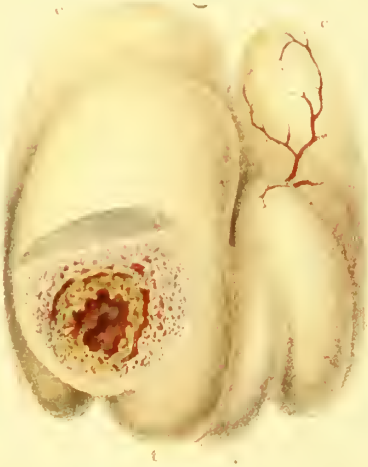

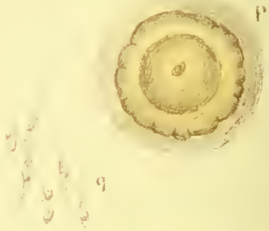

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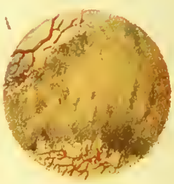

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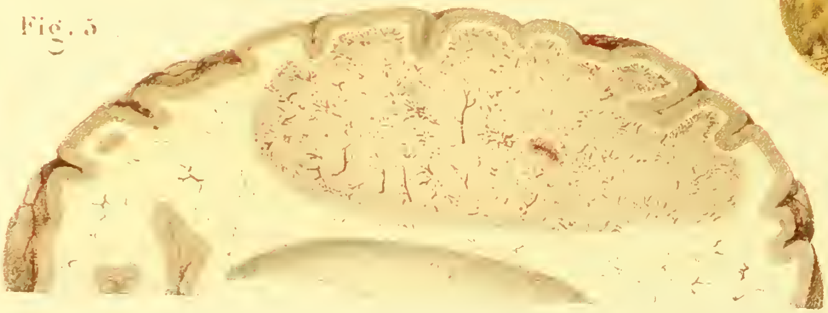

Fig. 1

PLATE XLII.

Fig. 1.—Sclerous or Proliferative Encephalitis (half nat. size). Vertical section of the right hemisphere of the brain at the outer part of the lateral ventricle. *r*, area of disease in the form of a large indurated patch, with softer parts of *café-au-lait* colour. A zone of healthy tissue separates this patch from the grey substance of the convolutions.

Fig. 1′.—Microscopic drawing of the diseased brain tissue (250 diam.). *c*, fibrillar network, granular bodies, and isolated fat granules; *t*, débris of nerve tubules; *a*, an arteriole, the sheath of which is filled with fat granules: *b*, fusiform or stellate cells from the same diseased patch.

Fig. 2.—Neuroglic Sarcoma (half nat. size). Outer half of the left hemisphere cut vertically. *s*, sarcomatous tract with yellowish points in process of degenerative change.

Fig. 3.—Fasciculated or Fibro-plastic Sarcoma of the Left Optic Thalamus (half nat. size). *c*, corpora striata; *o*, optic thalami; *t*, corpora quadrigemina. The left optic thalamus is more than thrice its natural size, and covers a part of the corresponding corpus striatum, and projects into the middle (third) ventricle. It contains in its substance a somewhat firm rounded tumour, traversed by numerous vessels and strewn with spots of ecchymosis. The corpora quadrigemina are increased in size.

Fig. 4.—Meningeal Sarcoma (Psammoma). Microscopic drawing (140 diam.) of a sarcomatous growth seated in the soft membranes covering the inferior surface of the lobes of the cerebellum. *m m*, calcareous concretions circumscribed by cells which are elongated and fusiform when seen in profile, flattened when seen in front; *c*, calcareous cylinders or lamellæ; *v*, a vessel.

Fig. 4′.—*p*, one of the above concretions; *g*, isolated cells and free nuclei of the same cells (250 diam.).

Fig. 5.—Blood Extravasation and Hæmatoidin Crystals occupying the Meninges of the under surface of the Cerebellum. (Alcoholism). *c*, meninges thickened, and of rusty colour; *f*, microscopic drawing of the subjacent nervous substance, which is infiltrated with red prismatic crystals of hæmatoidin (250 diam.).

Fig. 6.—Miliary Hæmorrhage in the Cerebellar Convolutions. (Cachexia.) (Half nat. size.) Section of a part of the cerebellum. The convolutions, *c*, are strewn with reddish points formed by extravasations of blood.

Fig. 7.—False Membrane circumscribing an old tract of Hæmorrhage. A, this membrane, of ochrey yellow colour, composed of very thin and vascular connective tissue, owes its colour to its infiltration with grains of hæmatosin and crystals of hæmatoidin; B, crystals of hæmatoidin.

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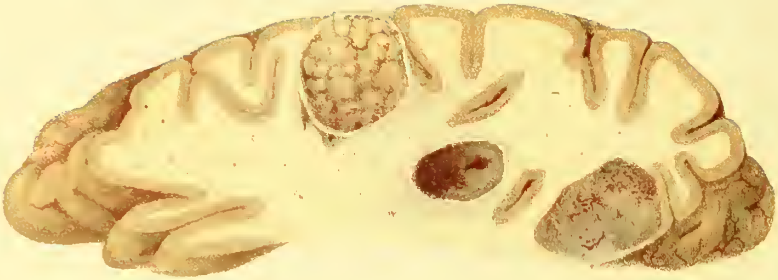
Fig. 3



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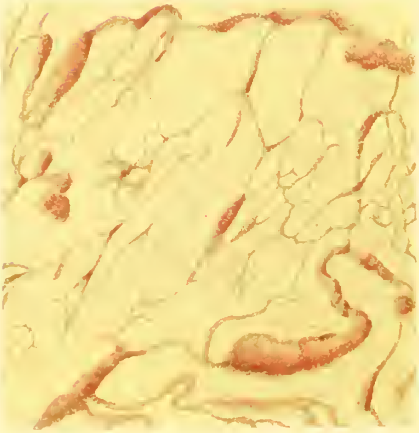

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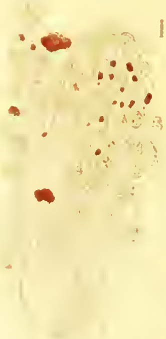

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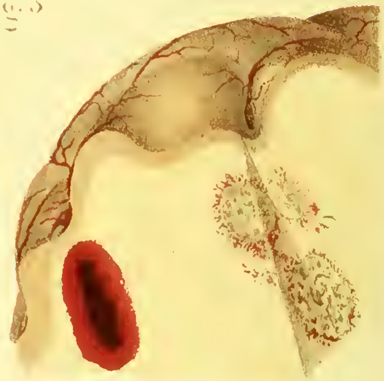

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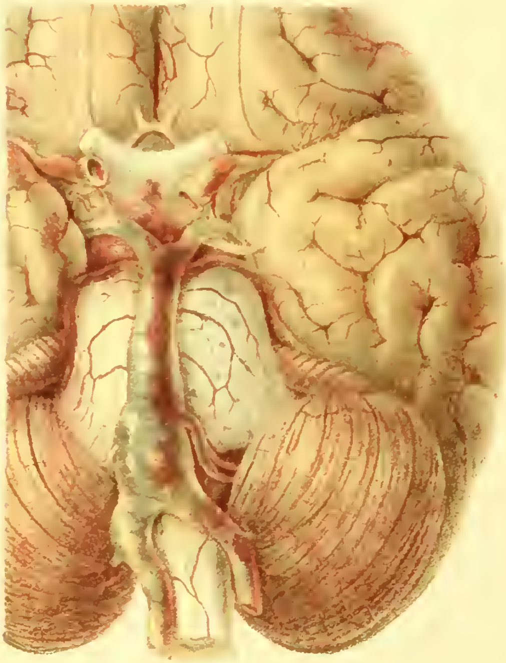

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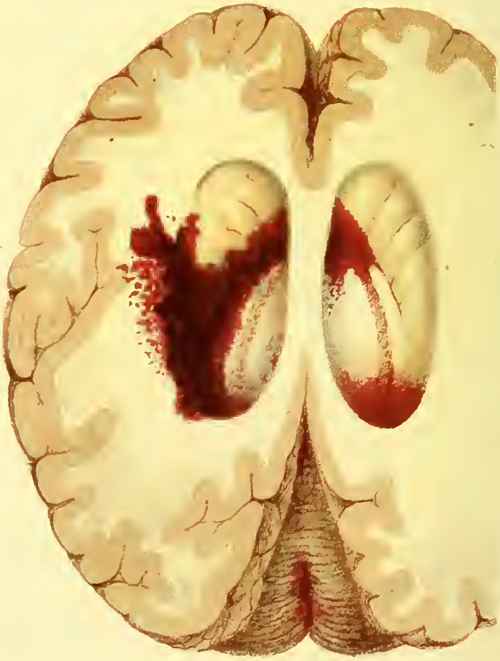

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PLATE XLIII.

Fig. 1.—Sarcoma of the left Optic Thalamus. Microscopic drawing (40 diam.) to show the vessels of the tumour represented in Plate XLII. Fig. 3. These vessels, composed of very thin walls, are the seat of numerous aneurysmal dilatations and prolongations in the form of ampullæ or culs-de-sac.

Fig. 2.—Neuroma of the Brain (half nat. size). Horizontal section of the anterior lobe of the brain at the level of the corpus callosum ; *n n*, two rounded tumours, of bluish-grey tint, cut vertically, to show their thickness. These tumours are composed of cells which have the greatest analogy to nerve cells. *s*, patch of hæmorrhage near the convolutions.

Fig. 3.—Fibro-plastic Sarcoma of Brain (half nat. size). Vertical section of the right hemisphere ; *s′ s*, sarcomatous tracts with blood extravasation in their substance. The patch *s* formed before the section a sort of hollow sphere, the cavity of which was filled with blood clot.

Fig. 3′.—Fusiform cells and pigment granules from the same sarcoma (140 diam.).

Fig. 4.—Cerebral Hæmorrhage (half nat. size). Horizontal section of the brain passing through the lateral ventricles. The tract of hæmorrhage occupies the posterior part of the corpus striatum, and the outer part of the left optic thalamus, in such a way that the two ganglionic masses are partly separated from each other. The blood, after tearing up the nerve tissue, has burst into the corresponding lateral ventricle, and from this into the ventricle of the opposite side, passing through the foramen of Monro.

Figs. 4 and 4′.—Small capillary aneurysms (15 diam.).

Fig. 5.—Aneurysmal Dilatation of the Basilar Trunk—Softening of the Pons (half nat. size). Under surface of the brain. The basilar trunk, *a*, is at its origin quadrupled in size. Its walls are altered, its channel dilated, and in great part obstructed by a fibrinous plug. The left half of the pons, *r*, is softened.

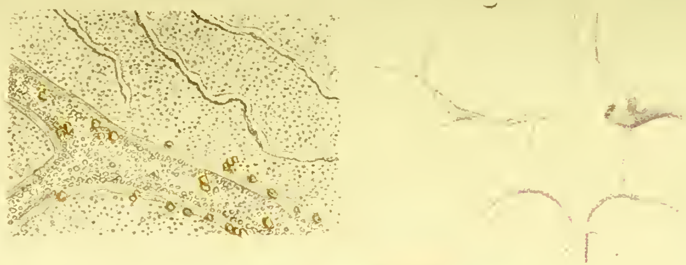
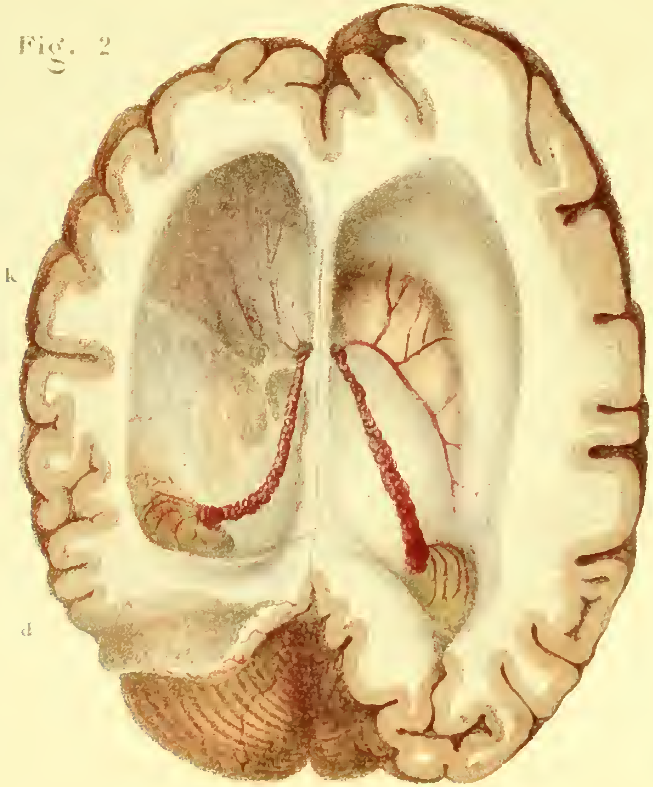


Fig. 2



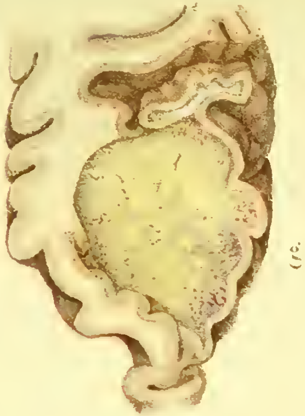
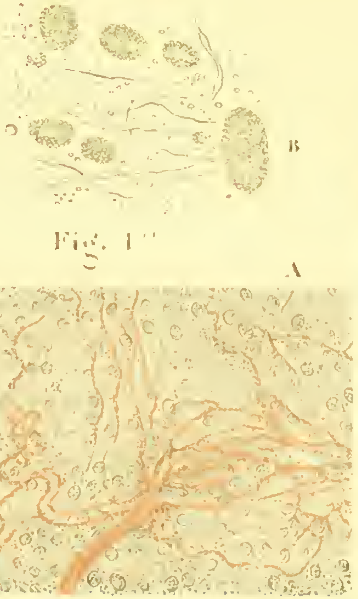
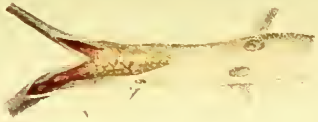


Fig. 1a





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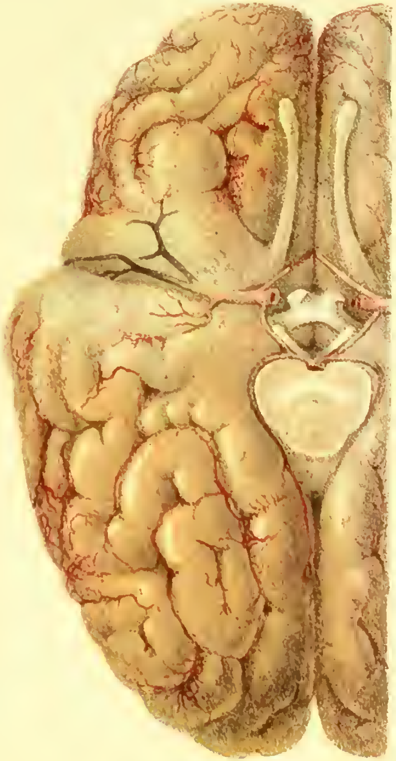

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PLATE XLIV.

Fig. 1.—Embolism of the Sylvian Artery and Consecutive Cerebral Softening (half nat. size). Brain seen on under surface; *s*, section of cerebral peduncles; *a*, Sylvian artery swollen by a plug; *r*, softened cerebral substance, circumscribed by a zone of injection.

Fig. 1′.—Sylvian artery opened so as to show the plug *v*, which is a warty vegetation from the mitral valve. This plug is prolonged by a coagulum formed at the extremity furthest from the heart. (Nat. size.)

Fig. 1″.—A, microscopic drawing of the softened nervous substance (90 diam.). The vessels are engorged with blood, and the nerve elements in process of disorganization; granular bodies or corpuscles of Gluge exist in great number. B, isolated corpuscles of Gluge and varicose nerve tubules. (380 diam.)

Fig. 2.—Old Softening of the Brain, of Cystic Appearance, in consequence of the Absorption of Part of the Nervous Tissue (half nat. size). Horizontal section of the brain at the level of the lateral ventricles. The left hemisphere is about one-third smaller than that of the opposite side. The corpus striatum, *k*, and a part of the left optic thalamus, have disappeared. In their place there exists only a membranous layer, beneath which is a hollow which holds a small quantity of serosity contained in the meshes of an areolar tissue. *d*, patch of softening in posterior cornu.

Fig. 3.—Cerebral Softening. The arterial circle of Willis, the left Sylvian artery of which is small, pale, and obliterated, in consequence of embolism. The corresponding anterior cerebral and posterior communicating arteries are thread-like.

Fig. 4.—Gangrene of Brain (half nat. size). Posterior cornu of the brain, with gangrenous patch, *g*, in its substance. This patch is circumscribed by a circle of injection.

Fig. 4′.—Vessel partly filled with fat granules and grains of hæmatosin; *t*, altered nerve tubes, molecular and fatty granulations (250 diam.).

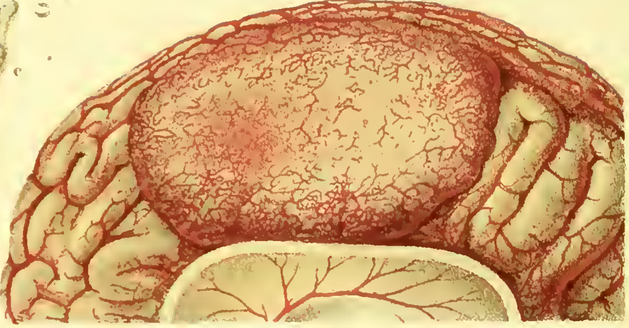

Fig. 1

Fig. 4

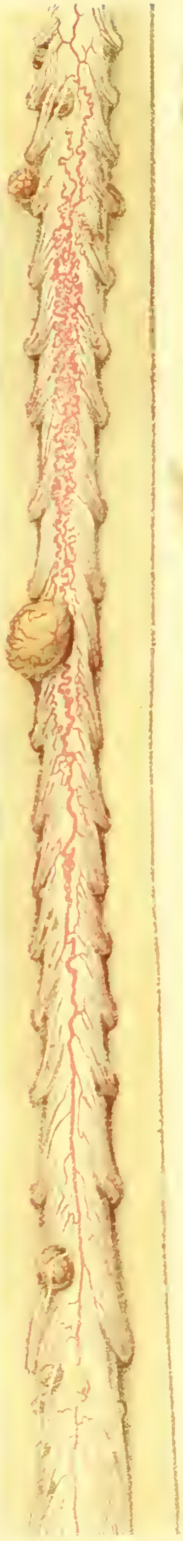

Fig. 3

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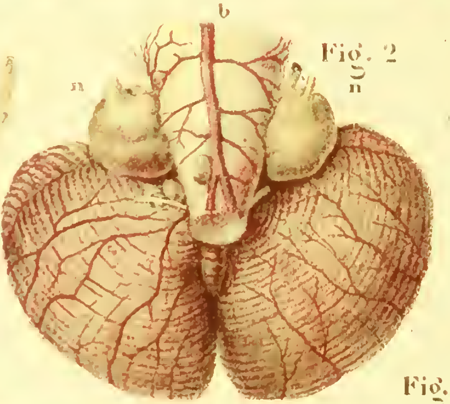

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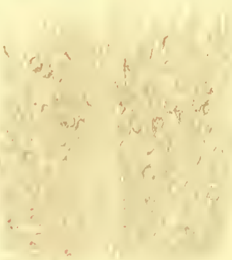

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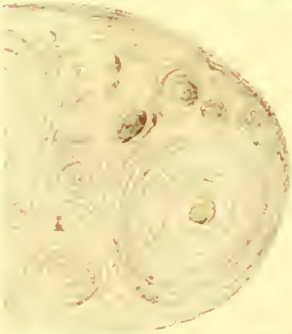

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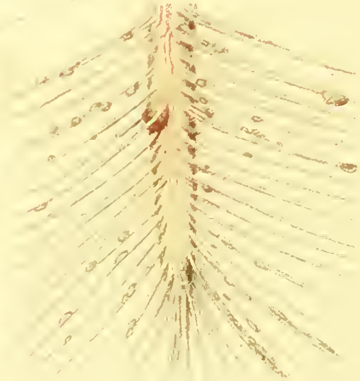

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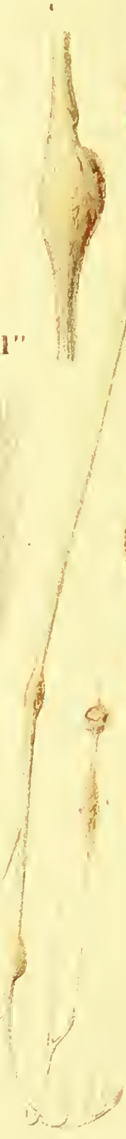


PLATE XLV.

Fig. 1.—FASCICULATED SARCOMA OF THE CEREBRO-SPINAL MEMBRANES AND NERVES (half nat. size). Part of the right cerebral hemisphere, on the inner surface of which is a tumour, *t*, ovoid, flattened, situated between the arachnoid and pia mater. This tumour is of medium consistence, and is traversed by numerous vessels, and bristles with small villous eminences.

Fig. 1′.—Several of these outgrowths seen with the microscope (15 diam.).

Fig. 1″.—Microscopic section (225 diam.), showing that the tumour is composed of elongated fusiform cells closely packed together.

Fig. 2.—Cerebellum and pons from the patient affected with the above tumour (shown in Fig. 1). *b*, basilar trunk, near the origin of which is a pea-shaped tumour; *n n*, two more voluminous tumours, situated between the cerebellum and the medulla oblongata, beneath the seventh and eighth pairs of nerves, and adherent to the dura mater by a pedicle which has been cut through. Two other small tumours are seen upon the roots of the right hypoglossal nerve.

Fig. 3.—Spinal cord of the same patient, viewed from the front. The cord is slightly injected, and presents, in the substance of the meninges, several tumours, *s s*, which are firm, rounded, and vascular, and of various size.

Fig. 3′.—Lower extremity of the cord in preceding figure. Numerous tumours, the size of a millet-seed or a pea, are seen in the course of the nerve roots.

Fig. 4.—*a*, *b*, *c*, *d*, *e*, different parts of one of the sciatic nerves and its branches, on which are found tumours similar to the preceding (nat. size).

Fig. 4′.—Transverse section of one of the largest of these tumours, seen under the microscope (10 diam.). This section shows that the elements of the tumour are arranged in the form of concentric rings around numerous centres, which are usually coloured with blood pigment, which seems to indicate that a number of vessels are the starting-point of the new growth.

Fig. 4″.—Longitudinal microscopic section of a tumour of medium size, the elements in which, *u*, have a fasciculated arrangement. The same elements seen under a higher power, *v*, have the form of elongated cells, with an elliptical and granular nucleus. (125 and 250 diam.)

PLATE XLVI.

Fig. 1.—Sarcoma of the Spinal Dura Mater (Epithelioma, *Robin*; Psammoma, *Virchow*). Dorsal part of the spinal cord, compressed on its anterior surface, narrowed and softened by the presence of an ovoid flattened tumour, situated on the inner surface of the dura mater (half nat. size).

Fig. 1′.—A, Microscopic section of the same tumour, in which are seen, under the microscope, shining calcareous globes effervescing with nitric acid; B, the same preparation after the addition of dilute nitric acid. The globes are formed by cells concentrically arranged, and rolled up like epidermic globes. (150 and 200 diam.)

Fig. 2.—Fibro-plastic Sarcoma of the Spinal Pia Mater (half nat. size). A portion of the spinal cord in the dorsal region presents, at the posterior surface and on the right side, a solid elongated tumour, *s*, which is but very slightly adherent to the pia mater, and is covered by the arachnoid, which forms a sort of veil over it. The substance of the cord opposite this tumour is injected and softened.

Fig. 2′.—Microscopic section perpendicular to the long axis of this tumour (20 diam.). On the section are seen a number of nodules, separated by vessels of new formation, and made up of concentrically arranged vessels.

Fig. 2″.—The same preparation under a higher power, to show the form of the elements, which are elongated cells with round or elliptical nuclei.

Fig. 3.—Gummatous Tumour of the Anterior and Lower Part of the Pons (nat. size). The bulb and pons are seen from the front. The latter presents at *a* a tumour which is in some measure bilobed, and is formed by two yellowish nodules situated one on each side of the middle line, and circumscribed by firm grey vascular tissue. The nervous substance is displaced or destroyed opposite this tumour; the nerves of the sixth pair almost entirely separated from their point of insertion.

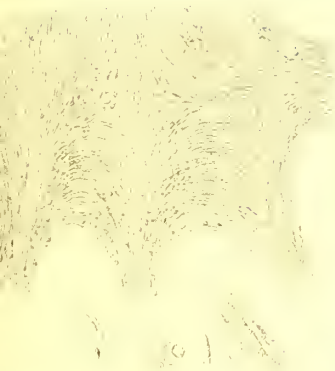
Fig. 3′.—Median section of the bulb and pons represented in Fig. 3. *c*, section of one of the yellow nodules seen at *a*; c', another yellow nodule situated at the upper part of the pyramids, and circumscribed by grey vascular tissue.

Fig. 3″.—Microscopic section of one of the gummatous nodules figured above (150 diam.). This section, made at the limit of the grey and yellow parts, presents at *a*, the grey part, small rounded cells arranged in a fibrous network; at *b b* are the same elements, which have become granular, and are in process of retrogression; *v v*, sections of vessels.

Fig. 4.—Central Tubercle of the Spinal Cord (nat. size). A portion of the upper part of the dorsal region of the cord is incised lengthwise, so as to show in its central part an ovoid tumour the size of a cherry-kernel, which appears to be only a tubercular mass.

Fig. 5.—Hypertrophy of the Spinal Ependyma, or Central Sclerosis of the Spinal Cord (nat. size). The cord is cut into lengthwise. A, cervical region, in which there is at *a* a hæmorrhagic exudation, opposite which commences the thickening of the ependyma, *e*; B, lower part of the cord, in which is found the same thickening, *e*, forming an actual central cylinder.

Fig.2



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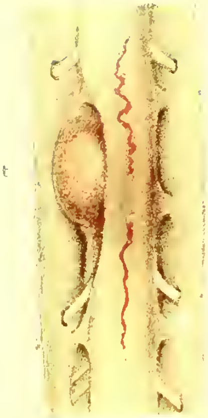

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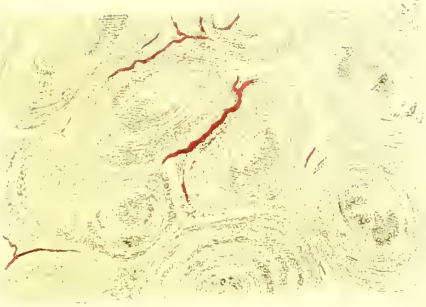

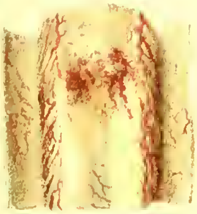

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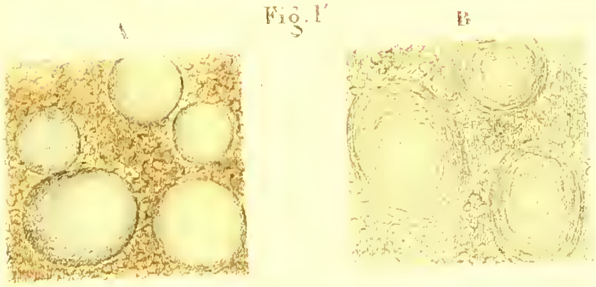

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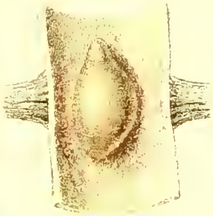

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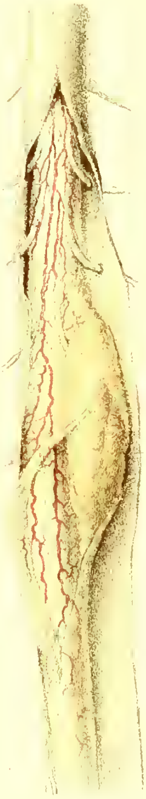

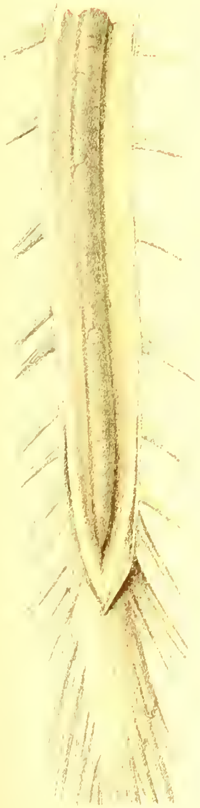

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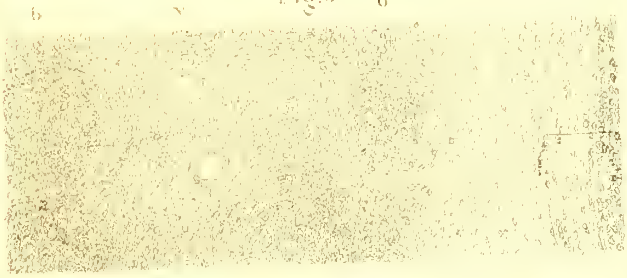

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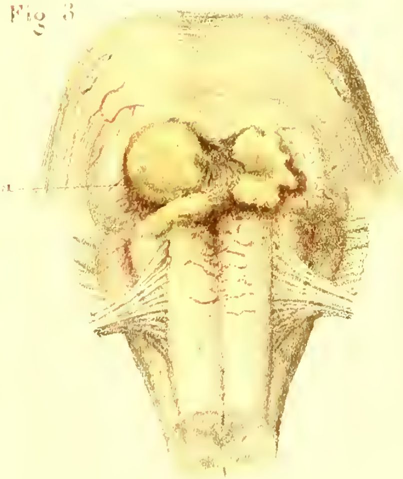

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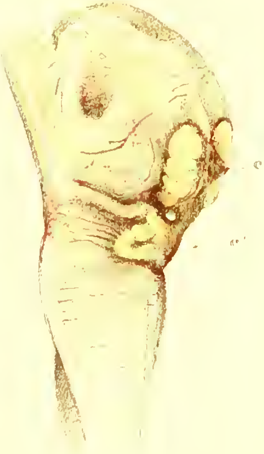

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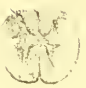

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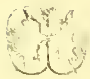

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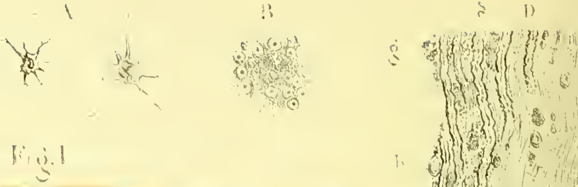

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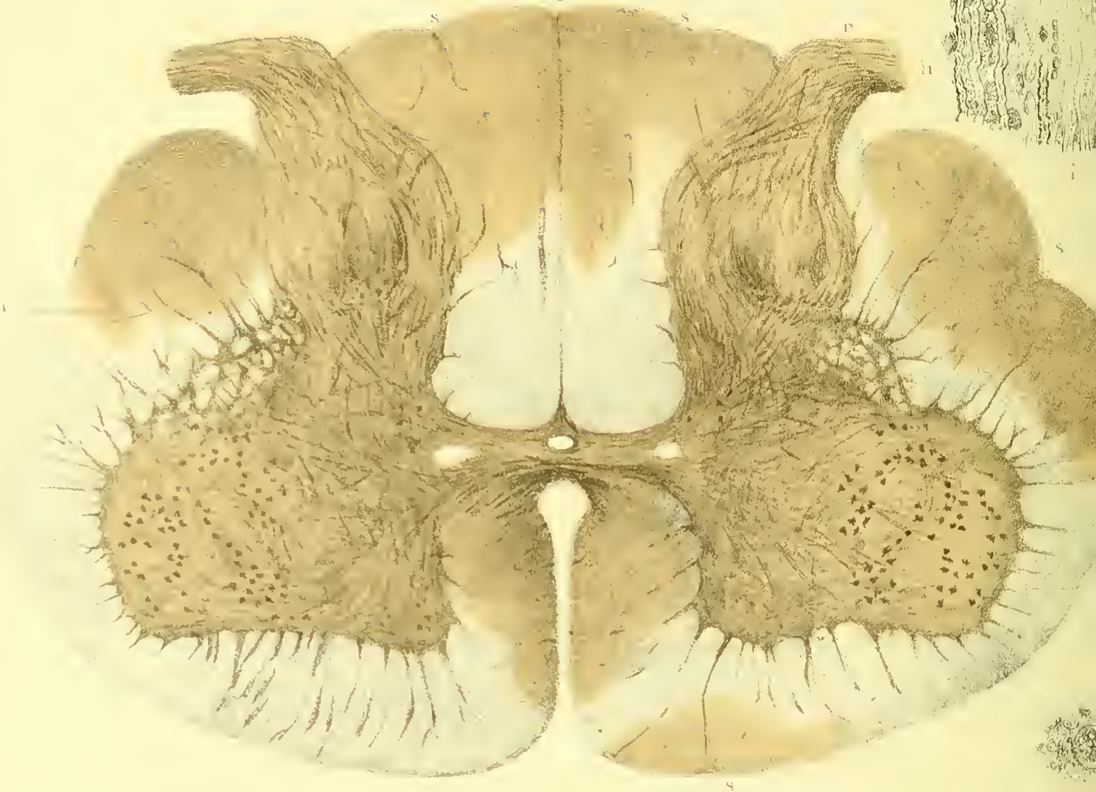

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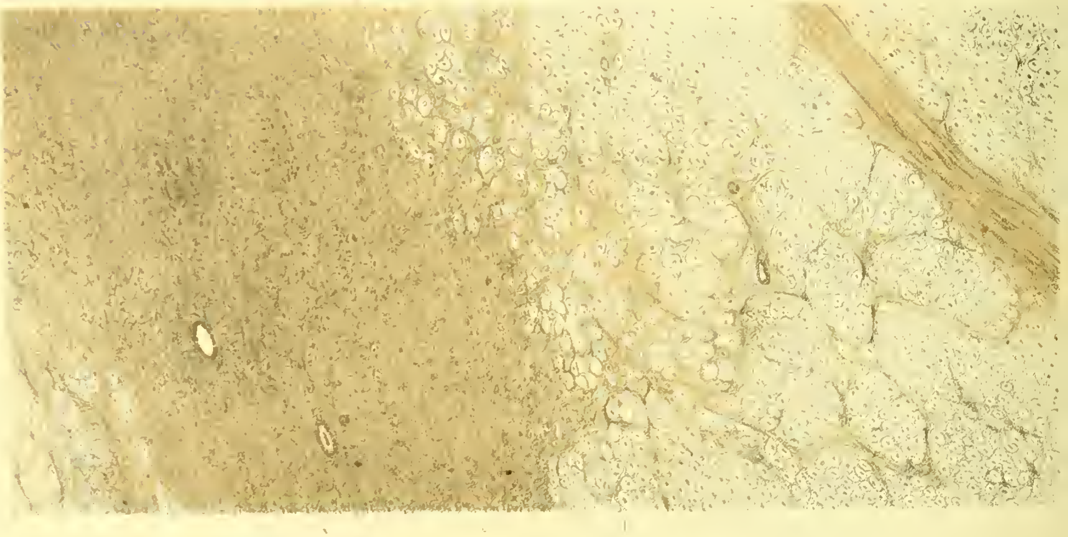

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PLATE XLVII.

Fig. 1.—Sclerous or Diffuse Proliferative Myelitis (Sclérose en plaques). Transverse section of the spinal cord, at the level of the fourth cervical pair. *s s*, greyish patches of sclerosis ; *c c*, anterior cornua ; *r r*, posterior roots. (12 diam.)

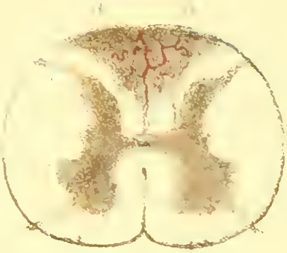
Fig. 2.—Part of the previous section taken at *t* (300 diam.). *s s*, sclerosed portion, in which are seen, in the form of somewhat black points, *a*, cylinder axes deprived of their myeline sheath, in consequence of the development of new connective tissue fibres. The very fine dotting seen in the centre of the sclerosed patch is due to the cross section of longitudinal fibrils. *l l*, limit of the disease, in which are seen sections of healthy nerve tubes beside nerve tubes in course of atrophy ; *v v*, section of vessels.

Fig. 2′.—A, connective tissue cells of the neuroglia containing three or four nuclei ; B, a small cluster of nuclei surrounded by a vaguely fibrillar and dotted substance between the nerve tubes (peripheral zone) ; C, transverse section of a vessel containing granular bodies, corpora amylacea, and free fat granules ; D, longitudinal section of the cord at a patch of sclerosis ; *c c*, peripheral zone of the plaque, in which are found a great number of nerve tubes with cylinder axes, *i*, surrounded by granular bodies, *g*, and amyloid bodies, *h* ; *f f*, zone nearer the centre of the plaque ; *k*, wavy longitudinal fibres of the central part of the plaque ; *l*, clusters of nuclei arranged in longitudinal series.

Fig. 3.—Transverse section of the spinal cord in the dorsal region. The grey parts indicate the sclerosed points.

Fig. 4.—Section at the median part of the lumbar region.

Fig. 3



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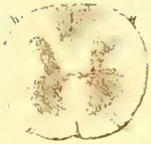

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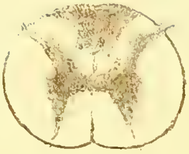

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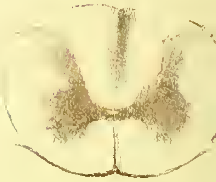

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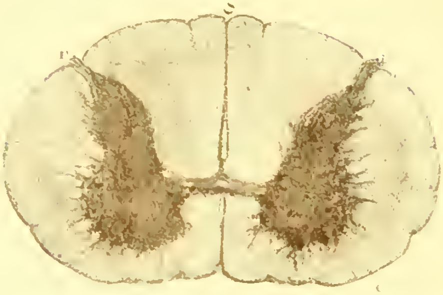

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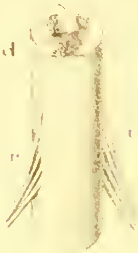

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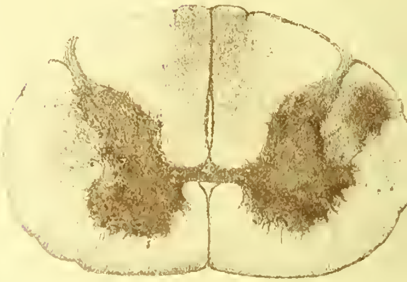

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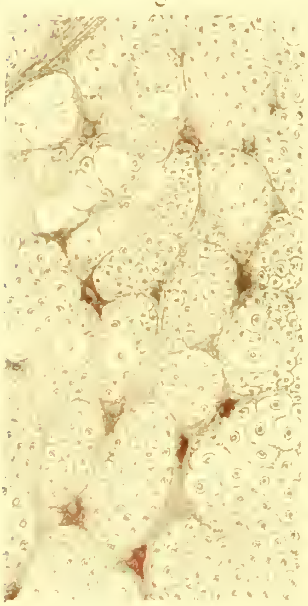

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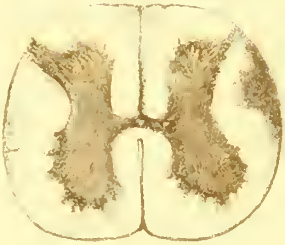

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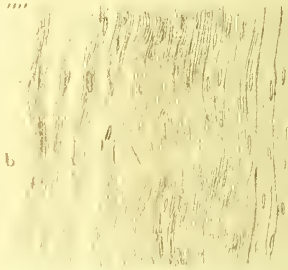

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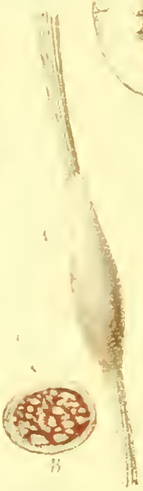

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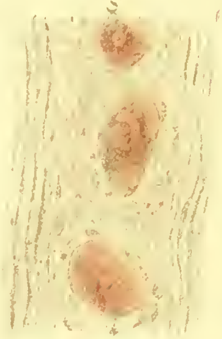

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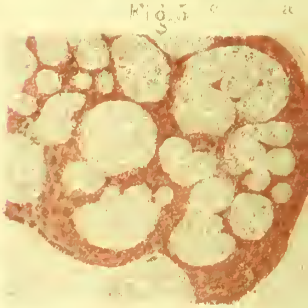

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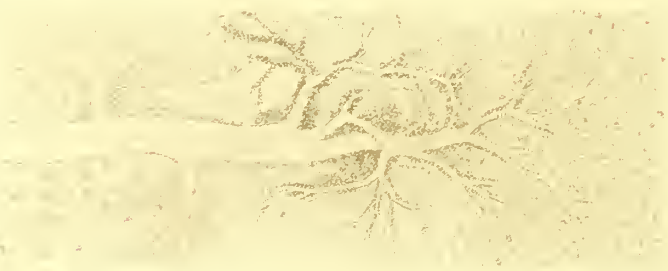

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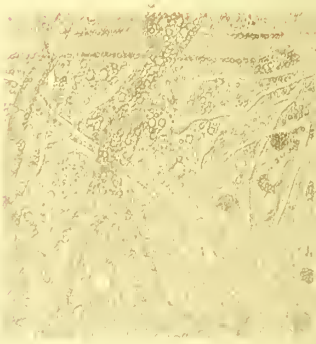

PLATE XLVIII.

Fig. 1.—Transverse section of a healthy spinal cord (cervical region). *c c*, anterior cornua; *r r*, posterior roots.

Fig. 2.—Sclerous Myelitis of the Posterior Columns (Progressive Locomotor Ataxy). Transverse section in cervical region. The posterior columns are affected on each side of the middle line.

Fig. 2′.—Transverse section in the dorsal region. The change is somewhat more extended.

Fig. 2″.—A similar section in the lumbar region. Almost the whole of the cord between the posterior nerve roots is altered.

Fig. 3.—Sclerous Myelitis of the Posterior Columns (Progressive Locomotor Ataxy). Part of the cord seen from behind (dorsal region); *d*, patch of grey degeneration in the position of the posterior columns; *p*, atrophied posterior nerve root; *a*, healthy anterior root. (Nat. size.)

Fig. 3′.—Transverse section of the same cord (cervical region). The posterior columns, which are greyish, semi-transparent, and gelatinous in appearance, have undergone a symmetrical change, *d d*.

Fig. 3″.—Microscopic drawing representing a part of this change (25 diam.); *c*, cells of the healthy posterior cornua; *v*, vessel whose walls, in their terminal branches, are infiltrated with abundant fatty granules; *g g*, granular bodies.

Fig. 3‴.—The same specimen (200 diam.); *v v*, branches of vessels; *c c*, so-called corpora amylacea; *g g*, granular bodies; *t*, nerve tubules.

Fig. 3⁗.—Microscopic drawing of a posterior nerve root, showing the mode of evolution of the atrophic process; *a*, two nerve tubules, scarcely altered, except by the presence of numerous fat granules in their sheath; *b*, nerve tubes, the medullary part of which has almost entirely disappeared; the axis cylinder persists, the nuclei of the sheath are very abundant; *c*, fibrillar tissue, containing numerous oblong nuclei; entire disappearance of the nerve tubes.

Fig. 4.—Secondary Degeneration of the Spinal Cord (Secondary Descending Sclerosis). Transverse section of the cord in the cervical region. At *s* is seen a dark greyish patch (patch of sclerosis), situated at the posterior part of the antero-lateral column, a little in front of the posterior root.

Fig. 4′.—Transverse section of the same cord in the lumbar region; *s*, the patch of sclerosis situated at the circumference.

Fig. 4″.—Transverse microscopic section, towards the inner limit of this patch; *a a*, healthy nerve tubes; *b*, atrophied nerve tubes; *c c*, connective tissue framework (neuroglia), with a collection of nuclei (400 diam.).

Fig. 5.—Medullary Neuroma. A, neuroma, occupying one of the nerve fasciculi of the cauda equina; B, enlarged transverse section of the same neuroma.

Fig. 5′.—Transverse microscopic section of the same change (20 diam.). The connective tissue framework, *t*, which separates the bundles of nerve tubes, *n*, is invaded by numerous cells, which can hardly be seen with so low a power.

Fig. 5″.—Longitudinal section of the same change (400 diam.). *c c*, ovoid cells, provided with a large nucleus, with nucleolus, and surrounded by connective tissue nuclei; *f f*, nerve tubes.

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Fig. 4

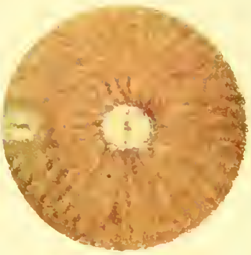
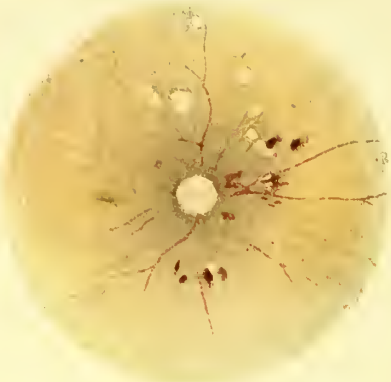


Fig. 5



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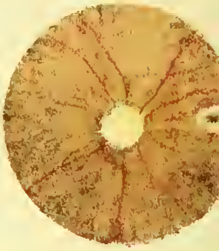

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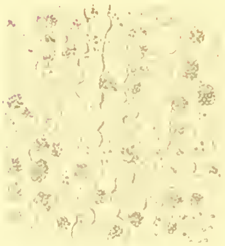

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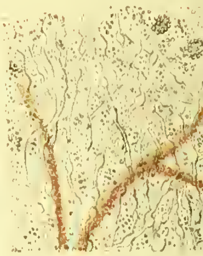

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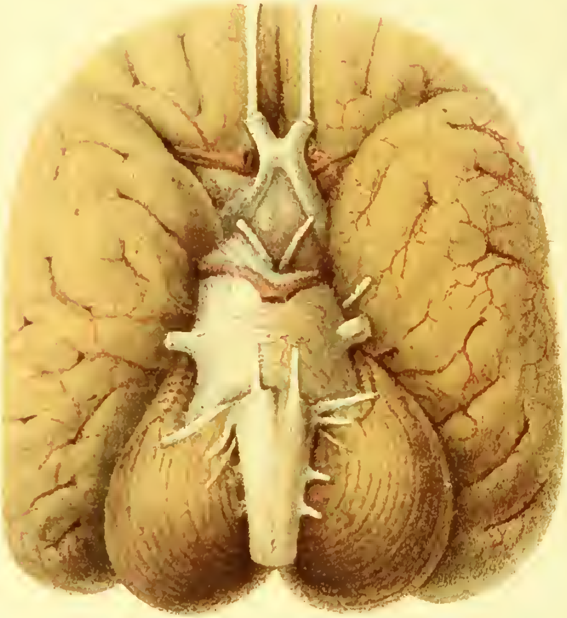

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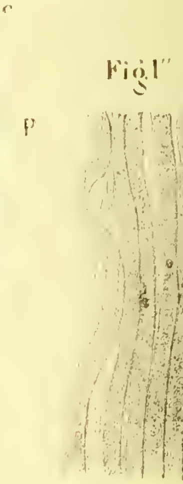

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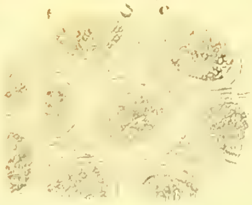

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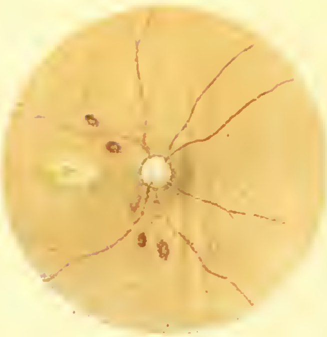

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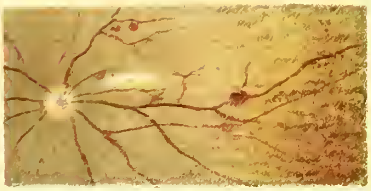

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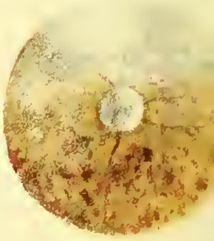

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PLATE XLIX.

Fig. 1.—Descending Degeneration or Sclerosis of the Nervous Fasciculi consecutive to Destruction of the Corpus Striatum (see Plate XLIV., Fig. 2) (half nat. size). A part of the brain and cerebellum are seen at the base; the left cerebral peduncle, the pons of the same side, *p*, and the corresponding pyramid, are indurated and evidently diminished in bulk. The left common oculo-motor (third nerve) is wasted and smaller than its fellow. The left sixth nerve is normal, but the right sixth, A, is considerably reduced in size.

Fig. 1′.—Perpendicular section towards the middle of the pons shown in Fig. 1. This section shows the difference between the two halves of the pons, one of which, *p*, is wasted to less than half its volume. (Nat. size.)

Fig. 1″.—Nerve tubes from the wasted right sixth nerve, A. The contents of these tubes have undergone granular degeneration.

Fig. 2.—Secondary Neuro-Retinitis (3 diam.). Right retina from a patient affected with a sarcomatous tumour of the left optic thalamus. (See Plate XLII., Fig. 3.) The optic papilla appears œdematous at its edges, and the retina, which is of opaline grey in one half, is in the other half strewn with hæmorrhagic spots, some of which are surrounded by a vascular network. The vessels have thickened walls; their calibre is narrowed or obliterated.

Fig. 3.—Secondary Optic Neuritis (150 diam.). Part of a perpendicular section of the right optic nerve is drawn; *c*, connective tissue framework, thickened, and infiltrated with small round nuclei; *t*, atrophied nerve tubes. A tumour (myxoma) existed in the anterior lobe of the left hemisphere.

Fig. 4.—Neuro-Retinitis Secondary to Cerebral Sclerosis (3 diam.). Anterior and inner aspect of the left retina. The papilla, which is of almost normal dimensions, and of a slightly greyish tint, has its arteries small and filiform, its veins voluminous and filled with blood.

Fig. 4′.—Right retina. The papilla is small, whitish, and atrophied (3 diam.). The vessels have disappeared in this position; they reappear further out, with marked diminution in their calibre.

Fig. 4″.—Right optic tract. The nerve tubes are varicose, and between them are abundant granular corpuscles. (250 diam.)

Fig. 4‴.—Microscopic drawing of the left optic tract. Between the nerve tubes, which have become varicose, are seen granular corpuscles and isolated fat granules.

Fig. 5.—Albuminuric Retinitis. Both retinæ are altered. The right retina is infiltrated with yellowish exudation, composed of granular bodies and fat granules; it presents also multiple hæmorrhagic spots. The walls of the capillaries are infiltrated with fat granules.

Fig. 6.—Leukæmic Retinitis (3 diam.). Both retinæ are affected; the right retina is the seat of an exudation, which extends like a veil in front of the papilla as far as to the yellow spot; several points of hæmorrhage exist in the course of the vessels.

Fig. 6′.—Enlarged view of part of the retina represented in Fig. 6, with exudation and spots of hæmorrhage (3 diam.).

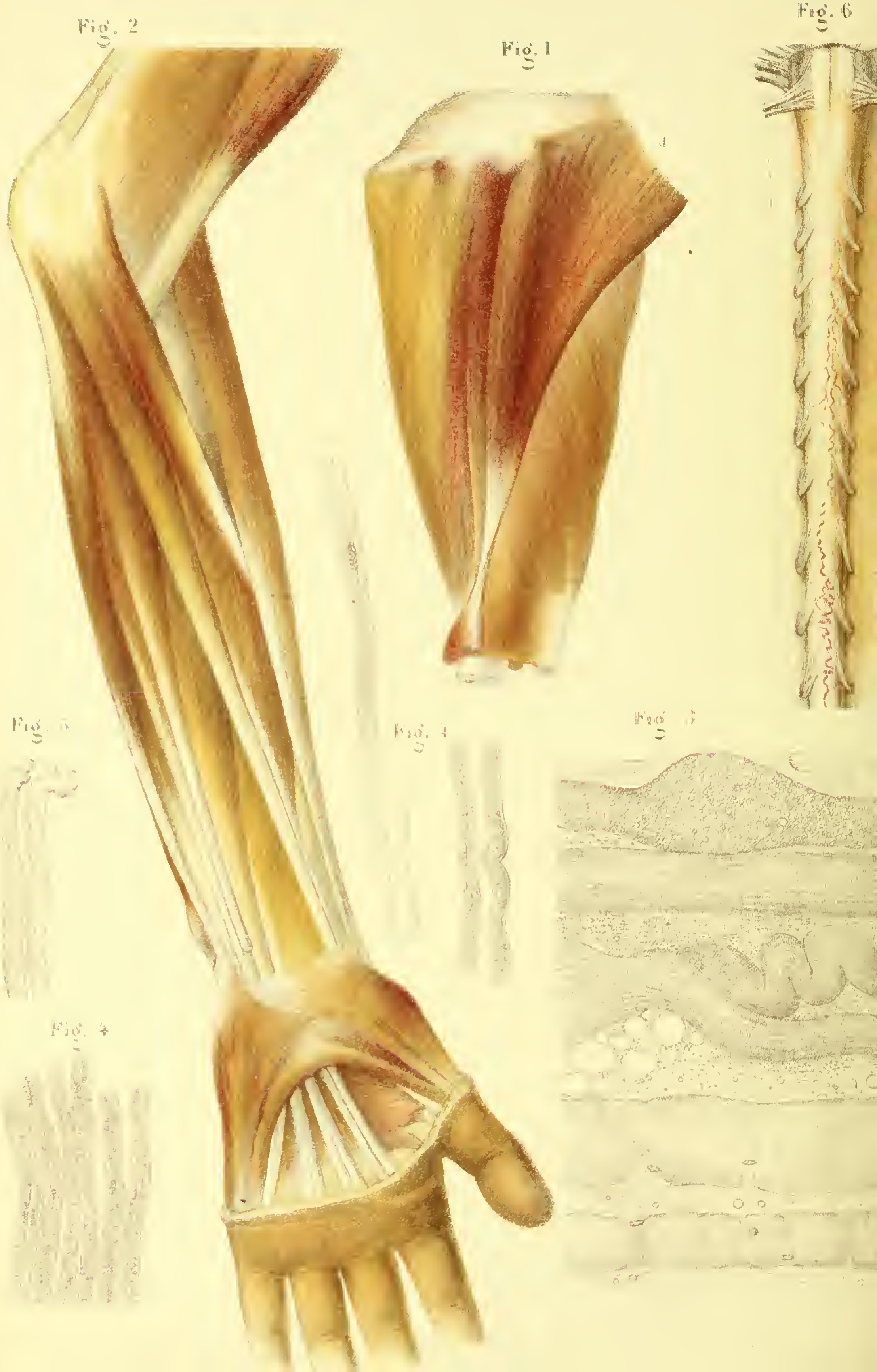

Fig. 2

Fig. 1

Fig. 6

Fig. 3

Fig. 4'

Fig. 5

Fig. 4

PLATE L.

Fig. 1.—Progressive Muscular Atrophy. Upper part of the left arm; the deltoid muscle and the triceps brachialis are marked out by an irregular yellow colour and evident atrophy (half nat. size).

Fig. 2.—Lower part of arm, forearm, and left hand dissected so as to show the muscles of the anterior region. Most of these muscles are wasted; some of them, such as the deep flexors and the muscles of the thenar eminence are almost reduced to the state of bands, and are of a deep yellow colour. (Half nat. size.)

Fig. 3.—Primitive muscular bundles from the deltoid muscle in various states of change. One of them, in process of granular and fatty degeneration, shows an evident swelling; lower down is a narrow bundle almost intact; then two bundles which are atrophied and sinuous, split up lengthwise, with preservation of the transverse striæ; lastly, two other bundles, one of which, in particular, somewhat narrow, shows in the interior of the sarcolemma fragments of muscular substance irregularly divided by transverse fissures or chinks, in the position of which are seen one or more nuclei. More or less abundant fat granules and a sort of fibroid framework exist in the interval of the primitive bundles (450 diam.).

Fig. 4.—Nerve tubes of the atrophied anterior roots. The medulla of these tubes is segmented or granular; the axis cylinders remain intact.

Fig. 4′.—Nerve tubes of the posterior roots similarly atrophied, and in which the change is somewhat less advanced (500 diam.).

Fig. 5.—Nerve tubes of the anterior roots which remain healthy (250 diam.).

Fig. 6.—Spinal cord of the same patient seen on its anterior surface. The anterior roots are atrophied and greyish, the posterior roots are healthy.

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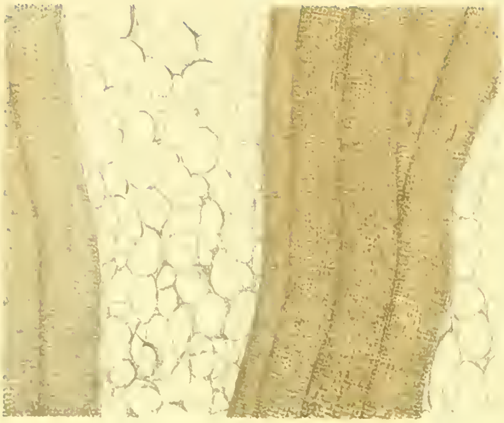

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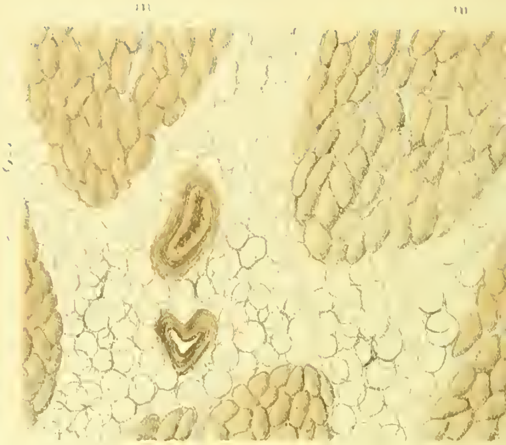

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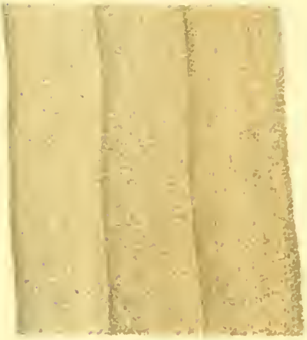

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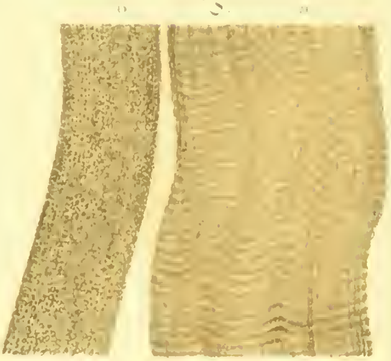

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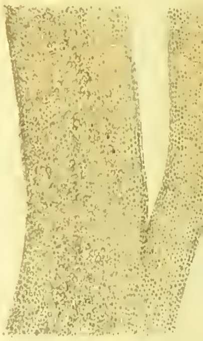

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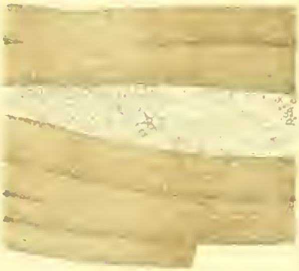

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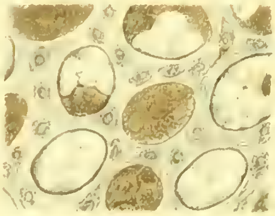


Fig. 6

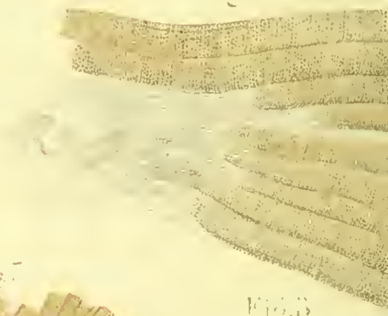


Fig. 1

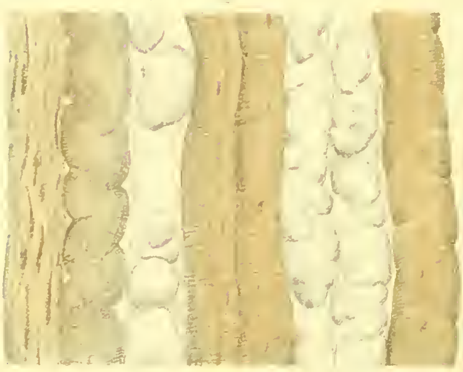


Fig. 7

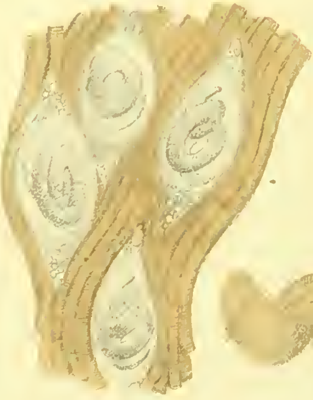


Fig. 8

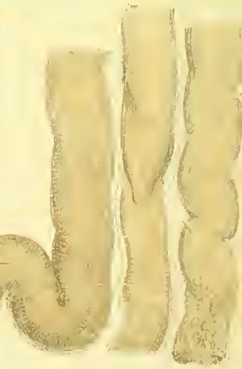


PLATE LI.

Fig. 1.—MYOSITIS WITH VITREOUS DEGENERATION. Longitudinal section (250 diam.). Primitive bundles of one of the recti abdominis muscles of a patient who died on the twelfth day of typhoid fever. Some of these bundles are normal, and show simply an increase in the number of their nuclei; others are swollen and sinuous or split across; and lastly, some, *a a*, show, in the interior of the sarcolemma, uneven vitreous masses, cracked, and separated by spaces which are in part occupied by nuclei.

Fig. 2.—MYOSITIS WITH VITREOUS DEGENERATION. Transverse section (300 diam.). *a*, primitive bundles in a state of vitreous degeneration; *n*, nuclei situated in the interior of these fibres, and in the network separating them.

Fig. 3.—WAXY OR AMYLOID DEGENERATION (LEUCOMATOSIS, LARDACEOUS DEGENERATION) OF THE MUSCLES. The sarcolemma of the primitive bundles is thick and highly refractile, the muscular mass shows numerous sinuosities.

Fig. 4.—FATTY DEGENERATION OF MUSCLES DUE TO PHOSPHORUS. Two of the primitive bundles from the gluteal muscles of a patient who died on the fourth day of poisoning by phosphorus. *a*, swollen fibre, the transverse striation of which is especially marked; *b*, fibre in which the muscular substance is partly transformed into proteid and fat granules (500 diam.).

Fig. 4′.—Primitive bundles of oculo-motor muscles of the same patient. The striation has disappeared, and is replaced by molecular granules. (500 diam.)

Fig. 4″.—Cardiac muscular fibres likewise affected with granular fatty degeneration.

Fig. 5.—ADIPOSE CONDITION AND FATTY DEGENERATION OF MUSCLES DUE TO ALCOHOL. A certain number of the primitive bundles, *m*, of the gluteal muscle, which have become granular, are separated by more or less abundant masses of fat cells, *g*. (Longitudinal section, 250 diam.)

Fig. 5′.—Transverse section of the same muscle, showing better the excess of fat. *m*, muscular fasciculi; *g g*, fat cells; *v*, vessel. (250 diam.)

Fig. 5″.—The muscular fibres of the heart (250 diam.), which have almost completely lost their striation, which is replaced by fine greyish granules; in the interval between these fibres are fat droplets, showing some co-existent fat accumulation.

Fig. 6.—MUSCULAR DEGENERATION CONSECUTIVE TO A CEREBRAL AND NERVOUS LESION. Primitive bundles of the obliquus externus muscle of the eye, the motor nerve of which is represented in Plate XLIX., Fig. 1″. These bundles are atrophied and infiltrated with fine fat granules, which have effaced both the longitudinal and transverse striæ. (250 diam.)

Fig. 7.—TRICHINOSIS OF MUSCLES. Part of a muscle affected with trichinosis. The parasite appears curled up and enclosed in a fibrous capsule which contains a certain number of calcareous granules. The muscular fibres in the neighbourhood are simply atrophied. (50 diam.)

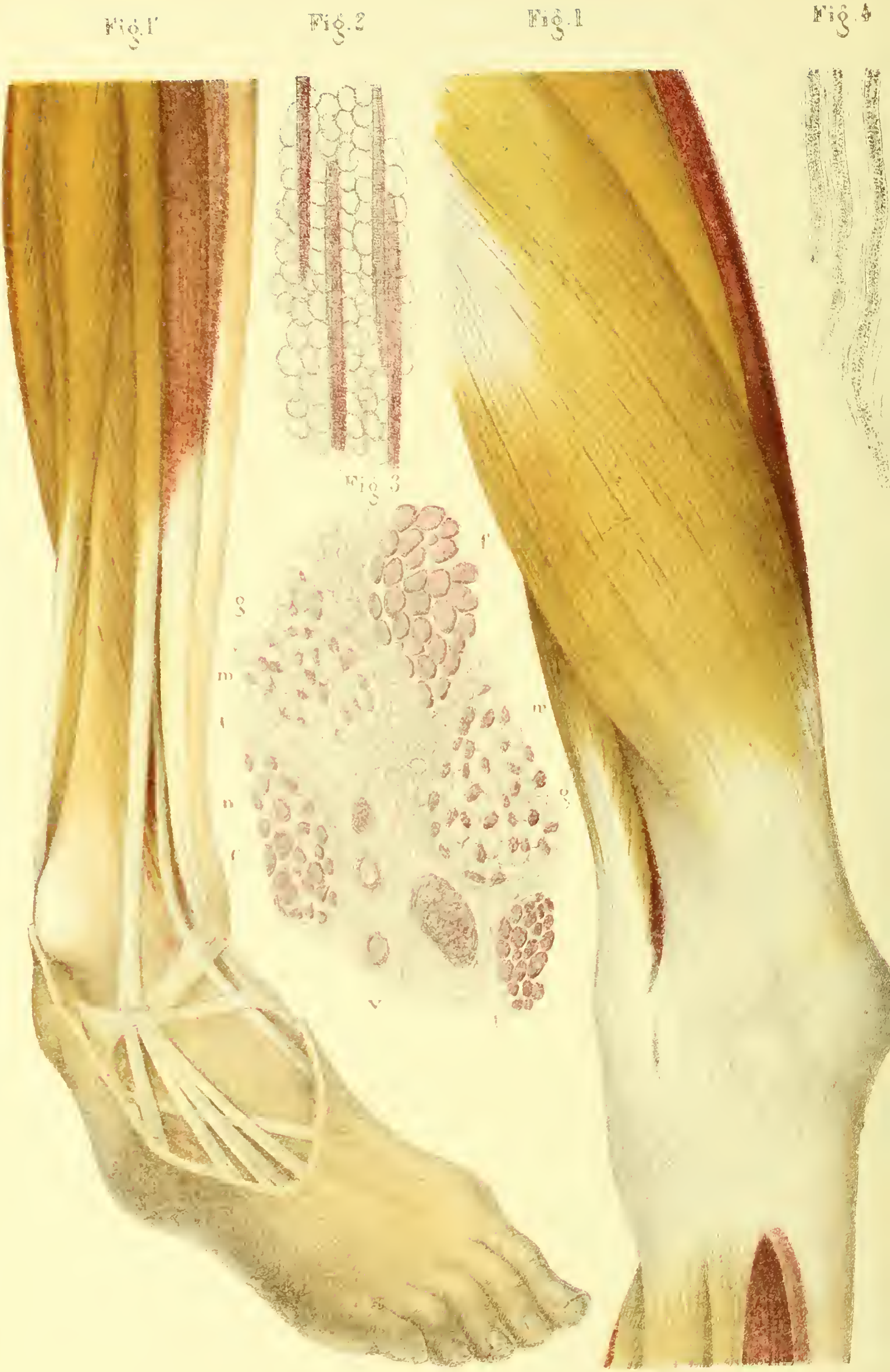


Fig. 1'
Fig. 2
Fig. 1
Fig. 4
Fig. 3
f
S
m
m'
n
g
v

PLATE LII.

Fig. 1.—Muscular Atrophy and Interstitial Accumulation of Fat. Lower part of right thigh and upper part of the leg of the same side (half nat. size). Most of the muscles of these parts, especially the extensor muscles, show a uniform yellow tint, very different from the normal colour; at the same time they are diminished in size and wasted. The sartorius, *c*, and some of the other muscles preserve their normal colour.

Fig. 1′.—Lower two-thirds of the right leg (half nat. size). The muscles of the anterior and lateral regions of this limb are discoloured and wasted. Those of the posterior region have undergone less change. The foot has the position of equino-varus.

Fig. 2.—Longitudinal section of one of the affected muscles (200 diam.). The primitive muscular bundles are atrophied, not granular, and in the intervals between most of them are one or two regularly arranged rows of fat cells.

Fig. 3.—Transverse section of the same muscle (200 diam.). Some of the muscular bundles, *f f*, are little or not at all altered, whilst the neighbouring bundles are atrophied and separated by abundant fat cells. *m m*, sections of wasted muscular fibres; *g g*, fat cells arranged in linear series in the intervals between the fibres; *v*, vessel; *t*, fibrous interstitial tissue; *n*, a nerve. The absence of nuclear formation in the sarcolemma in this case is worthy of notice.

Fig. 4.—Three nerve tubes from a nerve branch going to the same muscle. These tubes are in a state of advanced granular change. (300 diam.)

Fig. 1

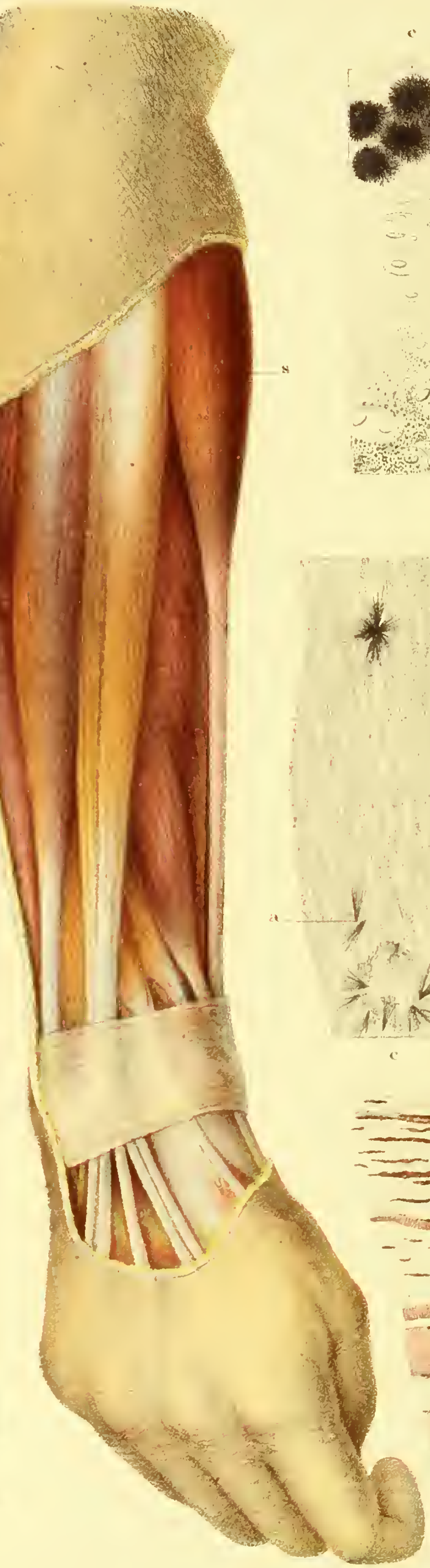


Fig. 3

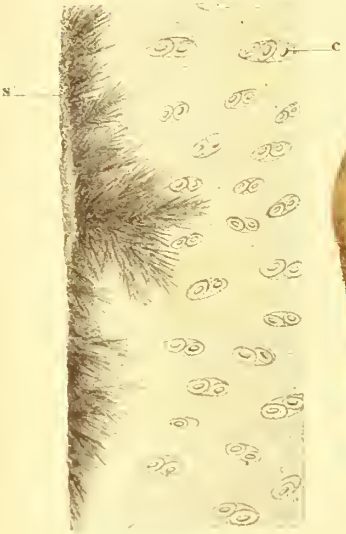


Fig. 4

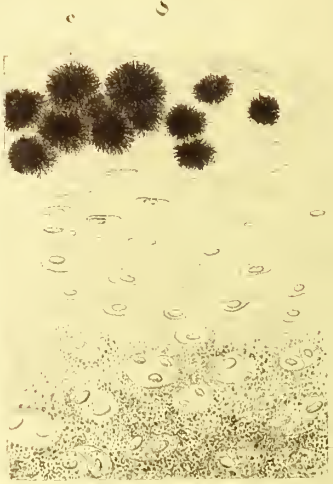


Fig. 1″

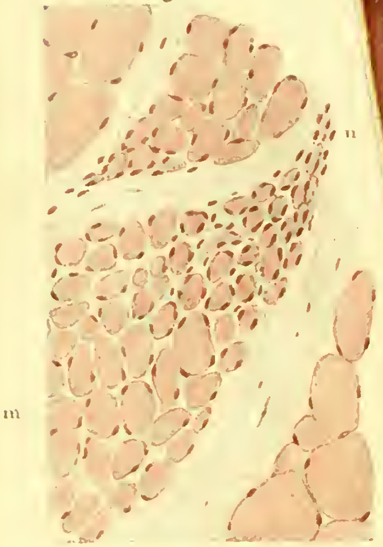


Fig. 5

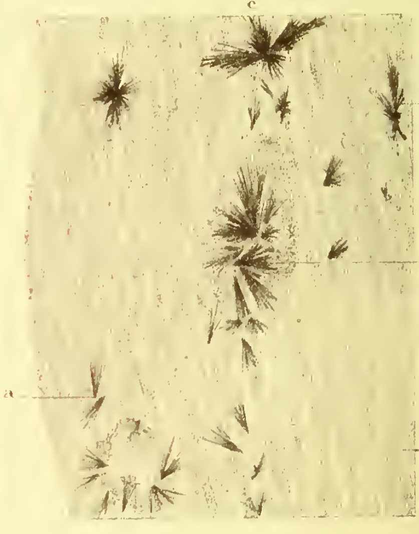


Fig. 1′

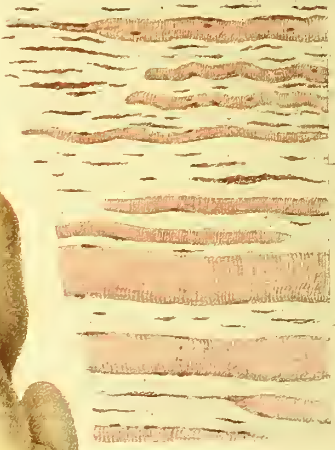


Fig. 2

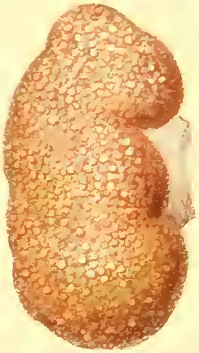


Fig. 6

PLATE LIII.

Fig. 1.—Muscular Atrophy from Lead Poisoning (half nat. size). Forearm of a patient who died from lead poisoning. The common and special extensors and the muscles supplied by the musculo-spiral nerve are wasted and faded in colour. The supinator longus, *s*, is unaffected.

Fig. 1′.—Longitudinal section of the wasted extensor indicis (250 diam.). *m*, muscular fibre, which is almost normal; *f*, primitive bundle of only one-third its natural size at the most, although still keeping its striation; *n*, primitive bundle, whose muscular substance no longer exists in part of its extent; *t*, fibrillar interstitial connective tissue, in which are seen elongated nuclei, directed lengthwise, which are no doubt the nuclei belonging to primitive bundles whose muscular tissue has completely disappeared.

Fig. 1″.—Transverse section of the same muscle (250 diam.). *l*, section of muscular fibres of normal volume; *m*, fibres diminished in size; *n*, fibres notably wasted, and the nuclei of which, increased in number, are evidence of secondary change.

Fig. 2.—Interstitial Nephritis from Lead Poisoning (Saturnine Nephritis) (half nat. size). Kidney from the patient whose muscles are shown in Fig. 1, &c. The organ is indurated, small, granular, uneven owing to the retraction of unequally formed connective tissue in its substance. It is a typical specimen of the renal change met with in cases of lead poisoning.

Fig. 3.—Gouty Arthritis. Perpendicular section of articular cartilage covering the condyles of the femur (250 diam.). The cartilage near its free surface is incrusted with numerous acicular crystals of urate of soda. *c*, cartilage cells.

Fig. 4.—Uratic Incrustation of the Thyroid Cartilage (same patient as in Fig. 3). *c*, urate crystals forming rounded masses; these crystals, like the grey granules, *g*, are dissolved by the action of acetic acid, giving rise to crystals of uric acid.

Fig. 5.—Gouty Nephritis. Longitudinal section of pyramids of Malpighi seen with the microscope (150 diam.). *c c*, urate crystals, arranged in masses at the clear points, seem to indicate an atrophy, if not a destruction of the tubules; *a a*, the same crystals, less abundant and arranged obliquely to the direction of the tubule in which they appear to have arisen; *t*, unaltered tubule.

Fig. 6.—Isolated groups of crystals of urate of soda.

Figs. 3, 4, 5, and 6 are the microscopic drawings of the principal changes represented in Plate LIV. (which see).

Fig. 8

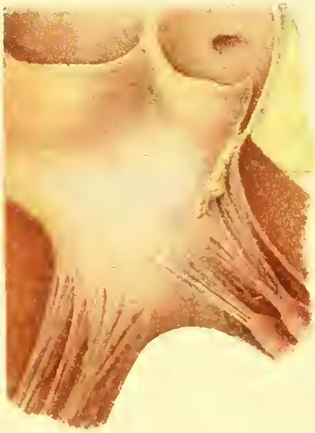


Fig. 1

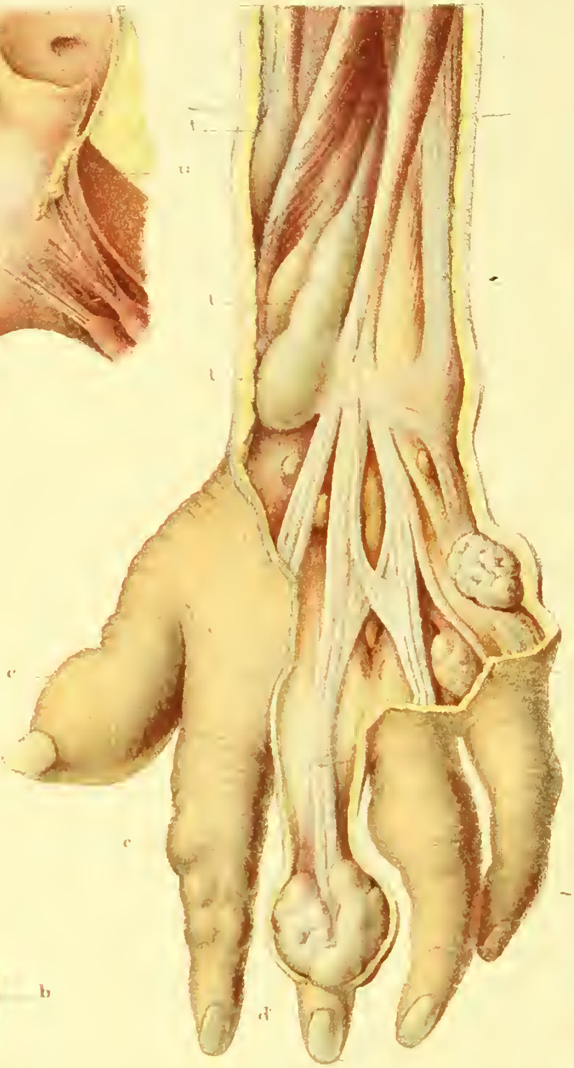
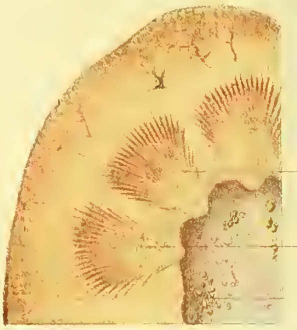


Fig. 7



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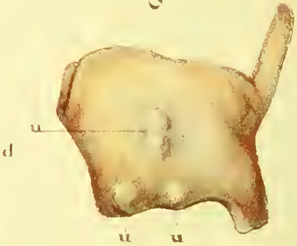
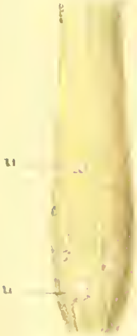


Fig. 5



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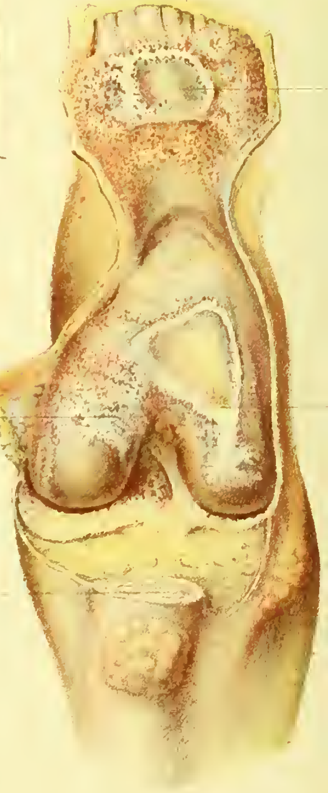
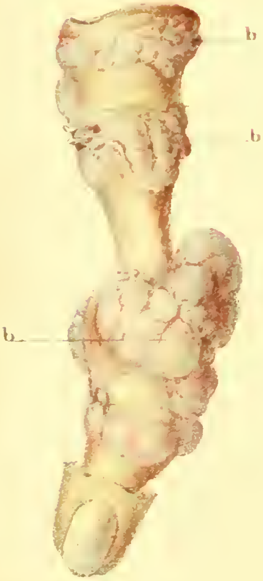


Fig. 2



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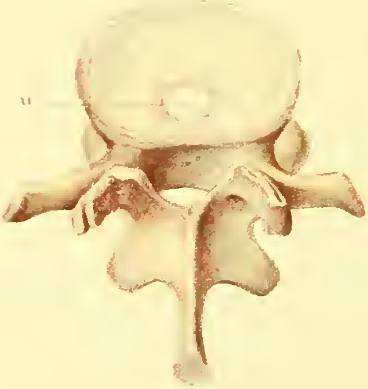


PLATE LIV.

Fig. 1.—Articular and Visceral Gout. Lower part of the left forearm and hand (half nat. size). *d d d*, nodular deposits of urate of soda forming so-called tophi ; *c c*, tophi covered by the skin. All these tophi are situated at the joints ; they incrust the articular cartilages and the ligaments. Tophi of smaller size exist opposite the carpal and wrist joints. *t t*, tendinous sheaths of muscles filled with soft chalky substance something like moist plaster. This substance, like that which forms the tophi, is composed of urate of soda.

Fig. 2.—Great toe of the right foot with its corresponding metacarpal and cuneiform bones (half nat. size). *b b*, abundant deposits of urates surrounding the joints of the toe.

Fig. 3.—Right knee, of which the patella has been raised up and the joint opened after section of the ligamentum patellæ (half nat. size). *c c*, condyles of the femur, the articular cartilages of which are incrusted with urate of soda, giving them a quite characteristic white tint ; *t*, surface of section of the ligamentum patellæ, in front of which is a voluminous tophus ; *r*, patella, the cartilage of which is the seat of incrustation of urates.

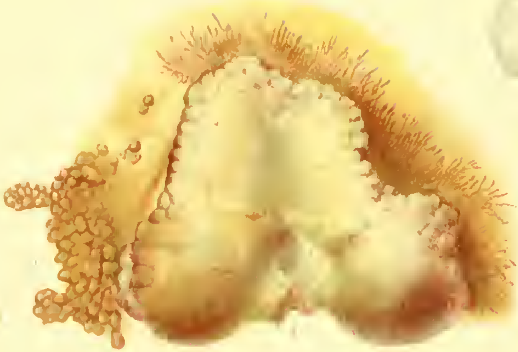
Fig. 4.—Lumbar vertebra. The softest part of the disc is firm, whitish and granular, in consequence of its incrustation with urates.

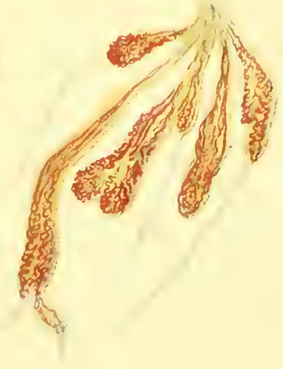
Fig. 5.—Tendo Achillis infiltrated at *u u* by a collection of urate of soda.

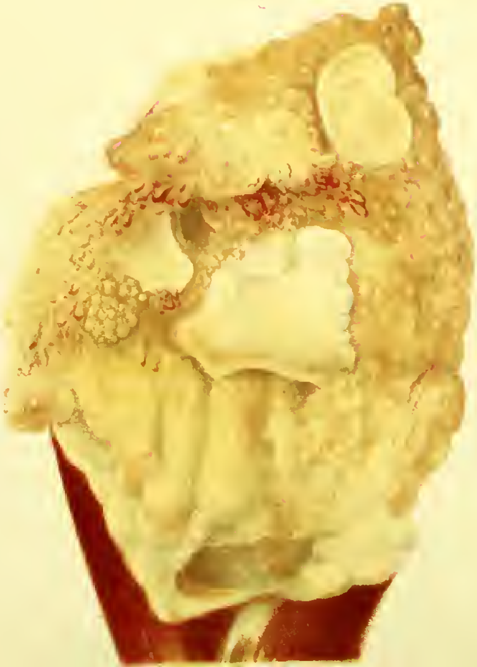
Fig. 6.—Left half of the thyroid cartilage, in which are seen at *u u* deposits of urate of soda beneath the periosteum and even in the substance of the cartilage.

Fig. 7.—Segment of a section of the kidney (nat. size). At *a a* are seen points and whitish masses formed by crystalline deposits of urate of soda. (See Plate LIII., Fig. 5.)

Fig. 8.—Part of the heart and cardiac valves of the left ventricle. *u*, elongated linear deposit composed of urate of soda in its deeper part, and of some crystals of uric acid at the surface.







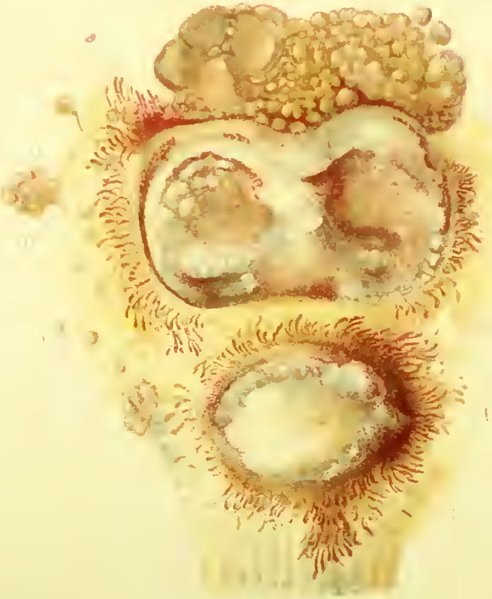


Fig. 3

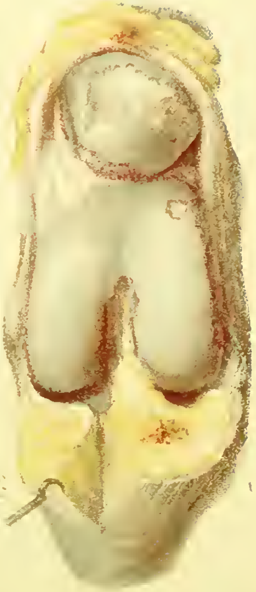


PLATE LV.

Fig. 1.—Chronic Rheumatic Arthritis, Arthritis Deformans (Arthrite Sèche) (half nat. size). Left knee-joint opened, and projected on a flat surface, A B. *c*, condyles of femur; *g*, glenoid cavities of the tibia; *r*, patella. The articular cartilages are partially or entirely worn away, and the bones show at the circumference osseous nodules of new formation *b b b*; *l*, crucial ligaments; *f f*, synovial fringes, which are vividly injected and considerably elongated; *a a*, the same fringes, either in process of ossification, or completely ossified; *e*, free bony bodies, the so-called foreign bodies, which form a voluminous mass at the posterior part of the joint.

Fig. 1′.—Cluster of synovial fringes with their conical appendages (30 diam.).

Fig. 1″.—Tip of one of these fringes, containing in its centre a vessel forming a loop, and some fat cells with margarine crystals. The fringe is covered with a layer of epithelium, and has on it two small budding outgrowths (200 diam.).

Fig. 1‴.—Foreign bodies (of bony nature) from the posterior part of the joint (nat. size).

Fig. 2.—Scrofulous Arthritis, or Fungous Arthritis (White Swelling) (half nat. size). The right knee-joint laid open, and the patella, *r*, turned up towards the femur. *p*, bursa beneath the patellar tendon; *c c*, condyles of the femur, of which a small part is covered by cartilage which is in course of fatty degeneration; *v v*, fungous vegetations developed both on the inner surface of the synovial membrane and on the surface of the bone, even where the cartilage has disappeared.

Fig. 3.—Tertiary Syphilitic Arthritis (two-thirds nat. size). The knee-joint is opened, and the patella raised up in front of the lower part of the femur. *t t*, section of the patellar tendon; *g*, gummatous mass invading part of the tendon, and forming a very thick pad beneath the synovial membrane, as is shown by a perpendicular incision over the front of the tibia. The mass of fat which is found at this point in the normal state has almost completely disappeared; *r*, patella, the cartilage of which is eroded; *c*, erosion of the cartilage covering one of the condyles.

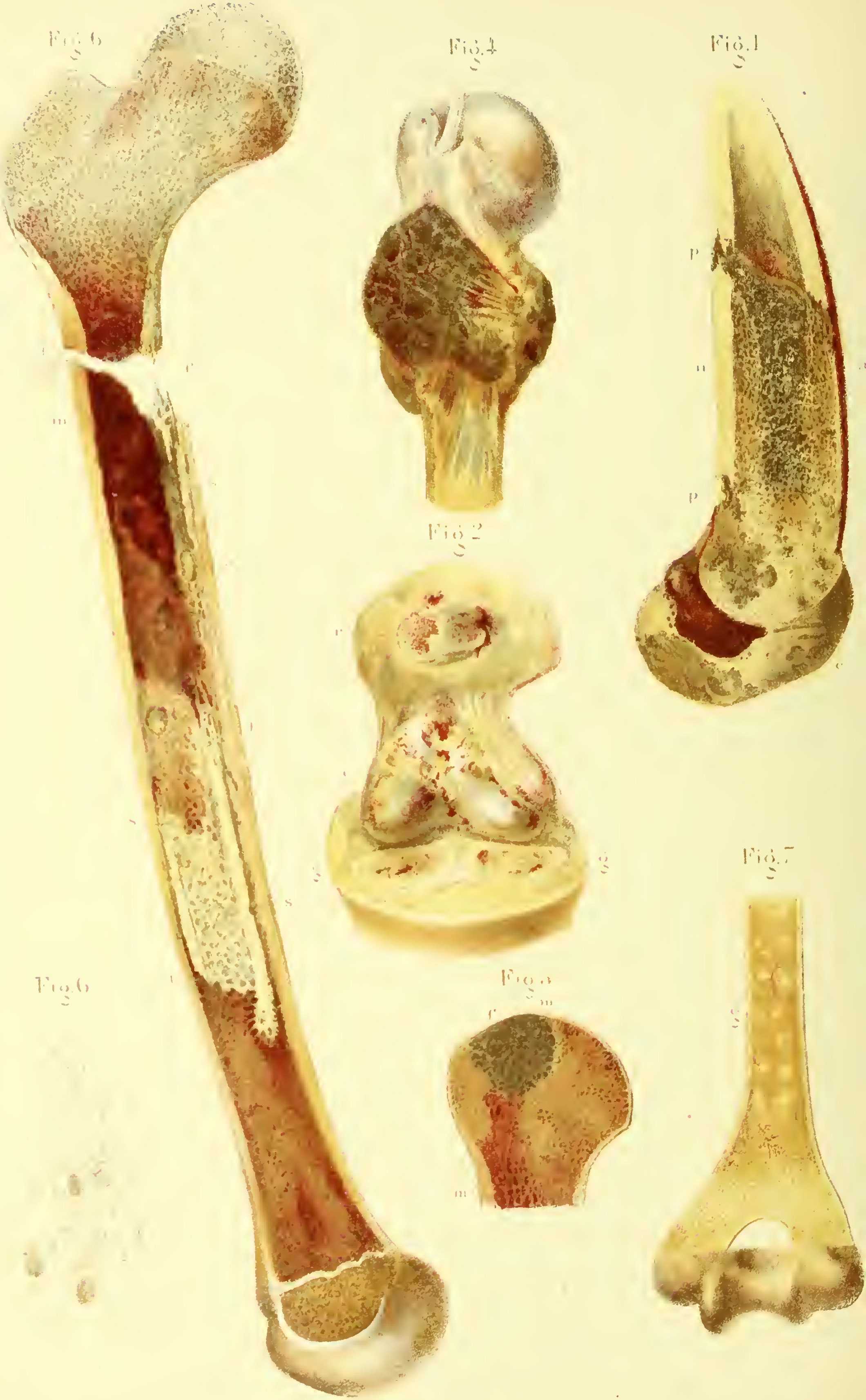


Fig. 6
Fig 3
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S

PLATE LVI.

Fig. 1.—Suppurative Osteo-Myelitis and Secondary Suppurative Arthritis (half nat. size). Median section of the lower part of the femur. *c*, one of the femoral condyles, the cartilage covering which is softened, infiltrated with pus and eroded. *a*, suppurated bony alveoli, forming here and there small abscesses; *n*, bony sequestrum showing a slight loss of substance at the two extremities, *p p*.

Fig. 2.—Secondary Suppurative Arthritis (half nat. size). Left knee-joint laid open. *g g*, glenoid cavities of tibia covered by a layer of pus, and with the cartilage completely eroded; *c*, condyles of femur with the cartilage softened and also eroded; *r*, patella showing the same change. The synovial membrane, vividly injected and thickened, contained purulent liquid.

Fig. 3.—Suppurative Myelitis and Spontaneous Fracture of the Bone (half nat. size). Median section of the entire length of the left femur. The diaphysis alone is altered. *m*, medulla infiltrated with blood and pus; *a a*, small abscesses in the bone; *t*, bony alveoli at the limit of suppuration; *s s*, sequestra formed by the compact part of the bone; *p*, thickened periosteum and bony layer of new formation corresponding to the sequestra; *f*, fracture, with loss of substance of bone at the posterior part of femur. The whole diaphysis has taken part in the change; the epiphyses are intact.

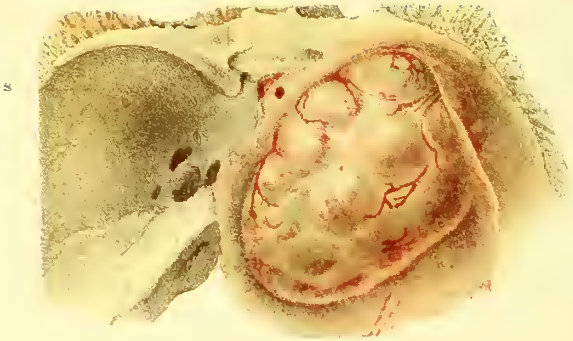
Fig. 4.—Melanotic Sarcoma of the Periosteum and Bone. Upper extremity of altered humerus, immediately below its neck. The lobulated, somewhat firm tumour, of black colour, has developed in the layers of periosteum, as can be readily seen with the naked eye.

Fig. 5.—Median section of the head of the humerus represented at Fig. 4. *m m*, masses of melanotic substance developed in the medullary cancellous tissue of the bone, filling its areolæ; *f*, small mass of sarcoma.

Fig. 6.—Elongated fusiform or rounded cells filled with pigment granules from the sarcomatous mass shown at Fig. 5.

Fig. 7.—Fatty Degeneration of Bone of Alcoholic Origin. Median section of lower end of humerus. The medullary canal, *g*, is enlarged and filled with a fatty mass. The alveoli of the spongy tissue are enlarged; the entire bone, although from a relatively young subject, has the appearance of the bone of an old man.

Fig. 6



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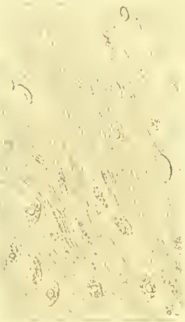

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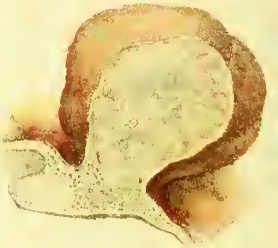

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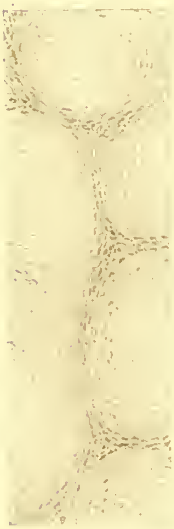

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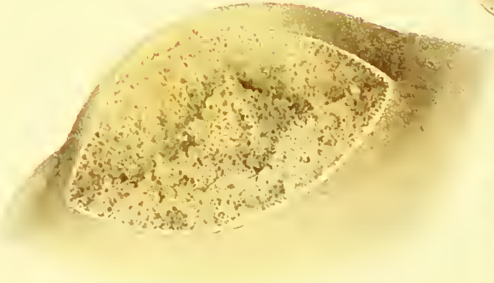
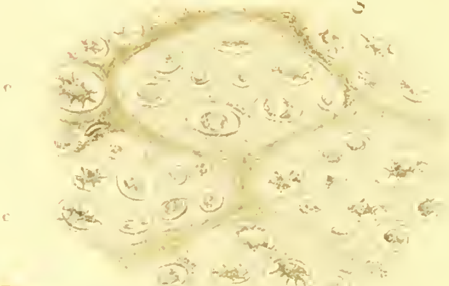


Fig. 5

Fig. 7



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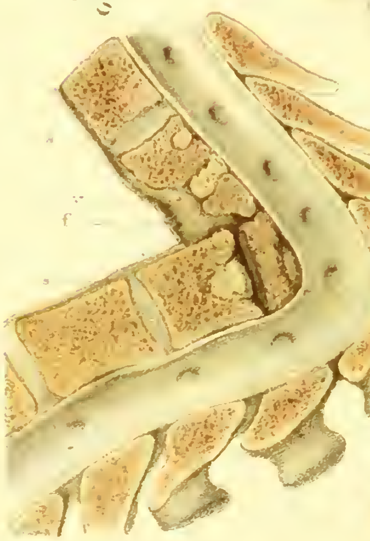

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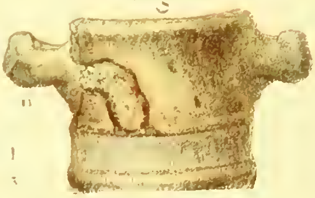

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Fig. 3'

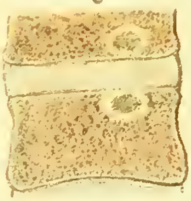

Fig. 3''

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PLATE LVII.

Fig. 1.—FUNGOUS OSTEITIS OF THE VERTEBRÆ, SO-CALLED VERTEBRAL CARIES (half nat. size). Sectional surface of the bodies of three vertebræ at their anterior third. *s s*, two sequestra, one of which is incompletely separated; *f*, irregular vascular areas surrounding these sequestra; *d*, inflamed intervertebral cartilage of reddish tint, softened and diminished in thickness; *c*, another cartilage likewise altered and greatly atrophied, in consequence of the existence of two patches of condensing osteitis developed in the neighbouring vertebræ.

Fig. 2.—FUNGOUS OSTEITIS OF THE VERTEBRÆ, WITH SPINAL CURVATURE (half nat. size). Part of the dorsal region of the vertebral column. *v v*, remains of the bodies of two vertebræ atrophied and destroyed by the change; *f*, fungous tissue; *s s*, bony sequestra circumscribed by fungous outgrowths; *l*, vertebral laminæ fused together. The spinal canal has retained its calibre, and so, in spite of the acute angle formed, there was no paralysis.

Fig. 3.—TUBERCULOSIS AND OSTEITIS OF THE VERTEBRÆ (half nat. size). Anterior surface of a lumbar vertebra. *n*, bony portion partly necrosed and infiltrated with some tubercular granulations; vascular fungosities exist around the altered bone.

Fig. 3′.—Perpendicular section of bodies of two vertebræ, in which are seen, on each side of the uniting intervertebral disc, two foci of inflammation, and two small sequestra in process of formation, *o o*.

Fig. 3″.—Fragment of a costal cartilage in which at *u* is a loss of substance which has led to an excavation resembling tubercular excavations (half nat. size). This cartilage is from the same patient as the bodies of the vertebræ seen in Figs. 3 and 3′.

Fig. 4.—SYPHILITIC EXOSTOSIS OF THE SKULL (half nat. size). A part of the left parietal bone is represented; it is surmounted by an osseous projection which is hollowed out into a cavity, this has been laid open to show osseous vegetations forming more or less regular columns in its walls.

Fig. 5.—RICKETS. Median section of part of a rib and its costal cartilage; the cartilage is evidently swollen at its insertion into the rib (nat. size).

Fig. 5′.—*a b c*, microscopic section of the same cartilage at the junction with the bone (30 diam.). *a′*, microscopic drawing of the lower third of this section (200 diam.), the cartilage cells show nothing special; *b′*, microscopic drawing at the middle third of the same section, the cartilage cells forming linear rows; *c′*, drawing of the part nearest the bone. A certain number of the cartilage cells are encrusted with lime salts.

Fig. 6.—CHONDROMATOUS TUMOUR OF THE BASIS CRANII (half nat. size). *s*, great wing of the sphenoid; *a*, clinoid process; *t*, lobulated chondroma attached to the *sella turcica*.

Fig. 6′.—The same tumour cut vertically to show its point of attachment to the bone.

Fig. 6″.—Microscopic section at the periphery of the tumour. This section shows the presence of cartilage cells in the midst of a fibroid mass (200 diam.).

Fig. 6‴.—Microscopic section of the central part of the same cartilage tumour. The cartilage cells are arranged in concentric layers around a common centre (40 diam.).

Fig. 7.—Microscopic section of a cartilage tumour (chondroma) developed beneath the skin of the humerus, where it had attained a considerable size. *t t*, tracts of connective tissue forming alveoli, in which are contained a certain number of cartilage capsules, *c c*, enclosing cells in process of ossification.

Fig. 3

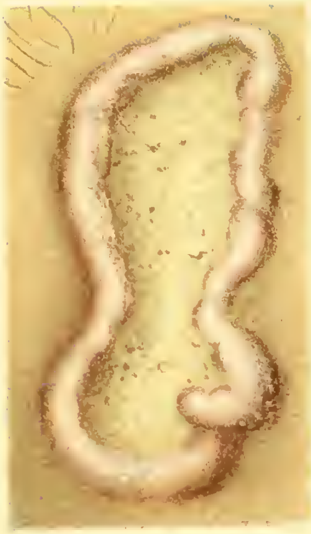
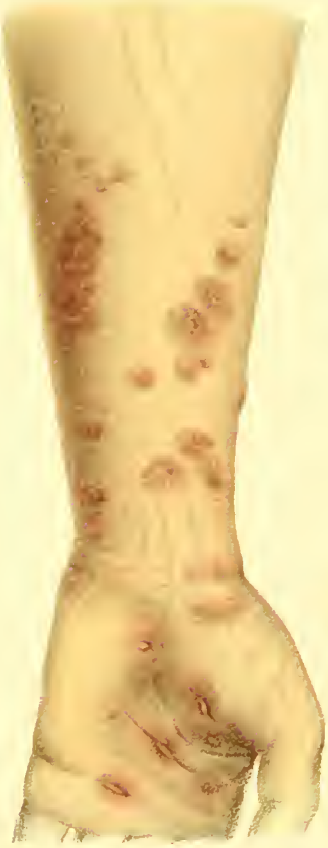


Fig. 1



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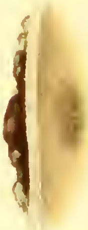

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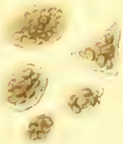


Fig. 4

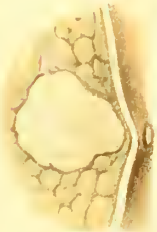


Fig. 2

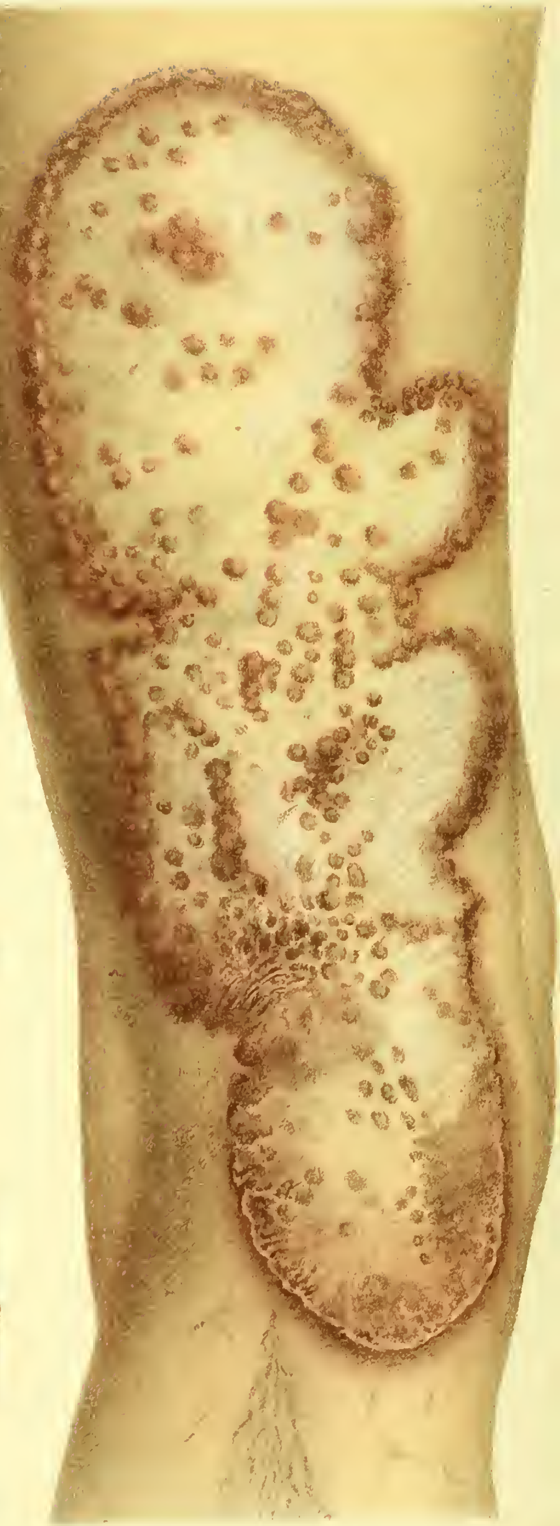


PLATE LVIII.

Fig. 1.—Syphilitic Eruption on the Skin (Plaques Syphilitiques) (half nat. size, secondary lesion). The left forearm and part of the left hand present on the anterior surface rounded nummular patches, which are nearly dry, depressed in the centre, slightly prominent at the margin, which is of yellowish colour. In the palm of the hand these patches are marked by a fissure of greater or less depth, running in the direction of the folds in the skin. The form of these eruptions and their appearance at the commencement of the secondary symptoms have caused them to be considered as mucous tubercles of the skin.

Fig. 2.—Circumscribed Scrofulide of the Left Thigh. The lower part of the skin of the limb presents on its internal surface a circumscribed change in the form of a large patch with festooned borders. This change is made up of lenticular projections, so-called tubercles, *t*, which are somewhat soft, of rosy or wine colour, numerous towards the borders of the patch, and less abundant towards its centre, where the whitish skin is the seat of old cicatrices, *c*.

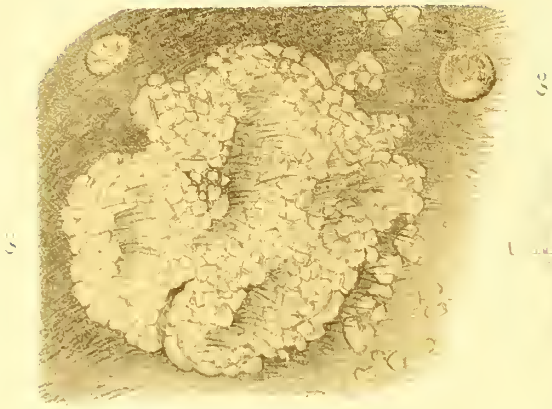
Fig. 3.—Ulcerated Epithelioma of the Face (two-thirds nat. size). Part of the cheek affected by a large ulcer. The base of the ulcer is greyish-white, firm and granular; its edges are projecting and turned back like the brim of a hat; they are, moreover, studded with small papilliform projections.

Fig. 4.—Epithelioma of the Arm (half nat. size). Incision in the vicinity of an ulcerated epithelioma at a projection which was already beginning to perforate the skin. Beneath the integument there is a dry homogeneous whitish mass, which is somewhat deeply buried in the fatty tissue, and thus appears to have its starting-point in the sweat glands.

Fig. 5.—Melanoma of the Skin (half nat. size). Part of the skin of the anterior surface of the tibia. This skin is altered by the presence of a blackish nodular tumour which appears to have started in the deep layers of the epidermis.

Fig. 5′.—Cells taken from this tumour—of greater or less size, rounded or angular. These cells have probably originated in the Malpighian layer; they are infiltrated with black pigment.

Fig. 2



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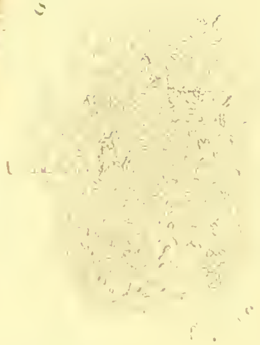

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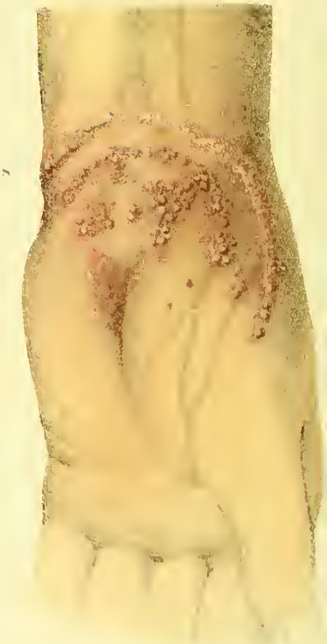

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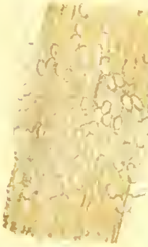

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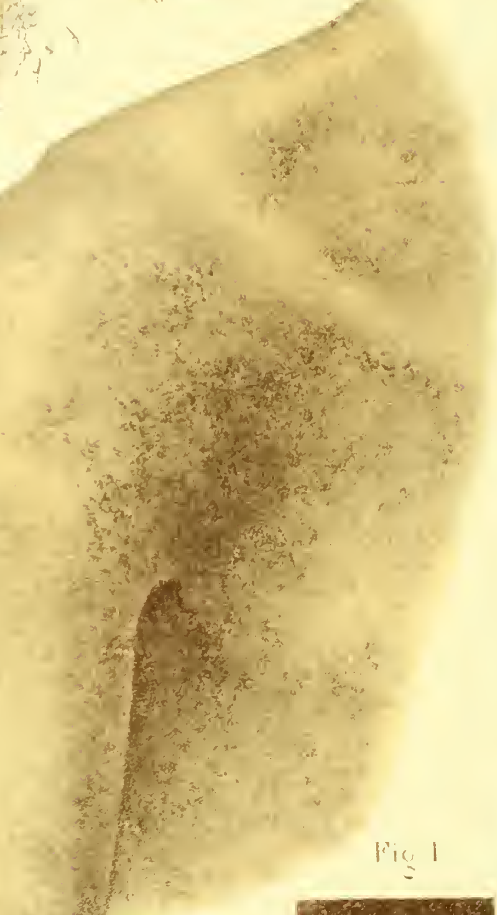

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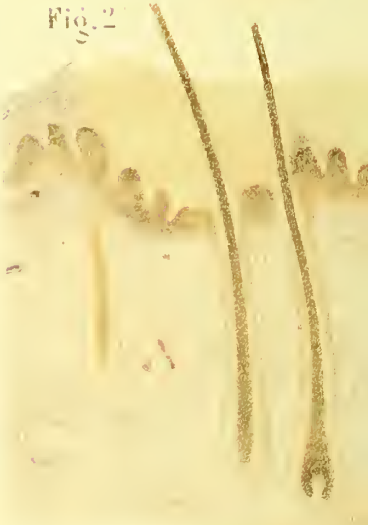

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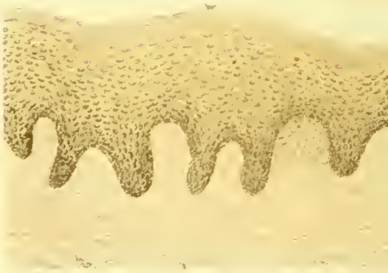

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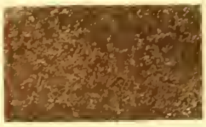


PLATE LIX.

Fig. 1.—ADDISON'S DISEASE (MALADIE BRONZÉE). Part of the skin of the forearm. The surface of the skin is remarkable for its dark blackish colour.

Fig. 1′.—Perpendicular section of a fragment of the same skin seen under the microscope. The epithelial cells, especially those which form the rete Malpighii or mucous layer, are infiltrated with pigment granules. (100 diam.)

Fig. 1″.—Cells infiltrated with similar granules. (300 diam.)

Fig. 2.—TINEA FAVOSA (FAVUS). Part of the hairy scalp strewn with favus crusts, *g g*, over which the hairs are broken and more or less altered.

Fig. 2′.—*a*, favus cup traversed by three hairs; *b*, another cup seen from below and traversed also by two hairs.

Fig. 2″.—Microscopic section perpendicular to the surface of the skin. *p p*, hairs whose sheath is filled with spores of the favus fungus; *a*, crust formed by spores which have led to the disappearance of the epithelial layer.

Fig. 2‴.—*c*, part of the hair split up and become fragile. On its surface are seen spores, *s*, arranged in rows or layers.

Fig. 3.—HERPES CIRCINATUS. Wrist of left hand seen in front, which is the seat of herpetic vesicles arranged in the form of concentric circles.

Fig. 4.—PITYRIASIS VERSICOLOR. Shoulder and left arm, the cutaneous surface of which is strewn with irregular dirty-looking spots of yellowish *cafe au lait* colour, most of them covered by a slight scaly desquamation.

Fig. 4′.—*c*, epithelial cells; *t*, tubes; *s*, spores from the scraping of the patches of pityriasis represented at Fig. 4.

Fig. 3

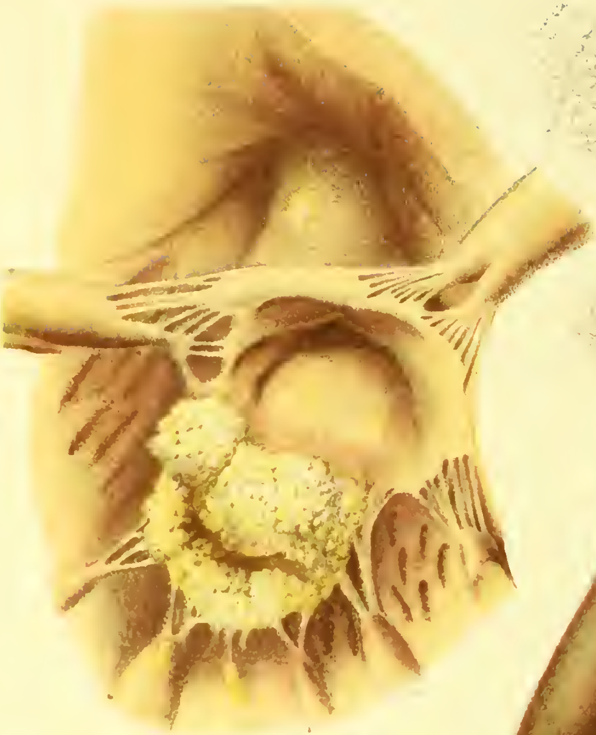
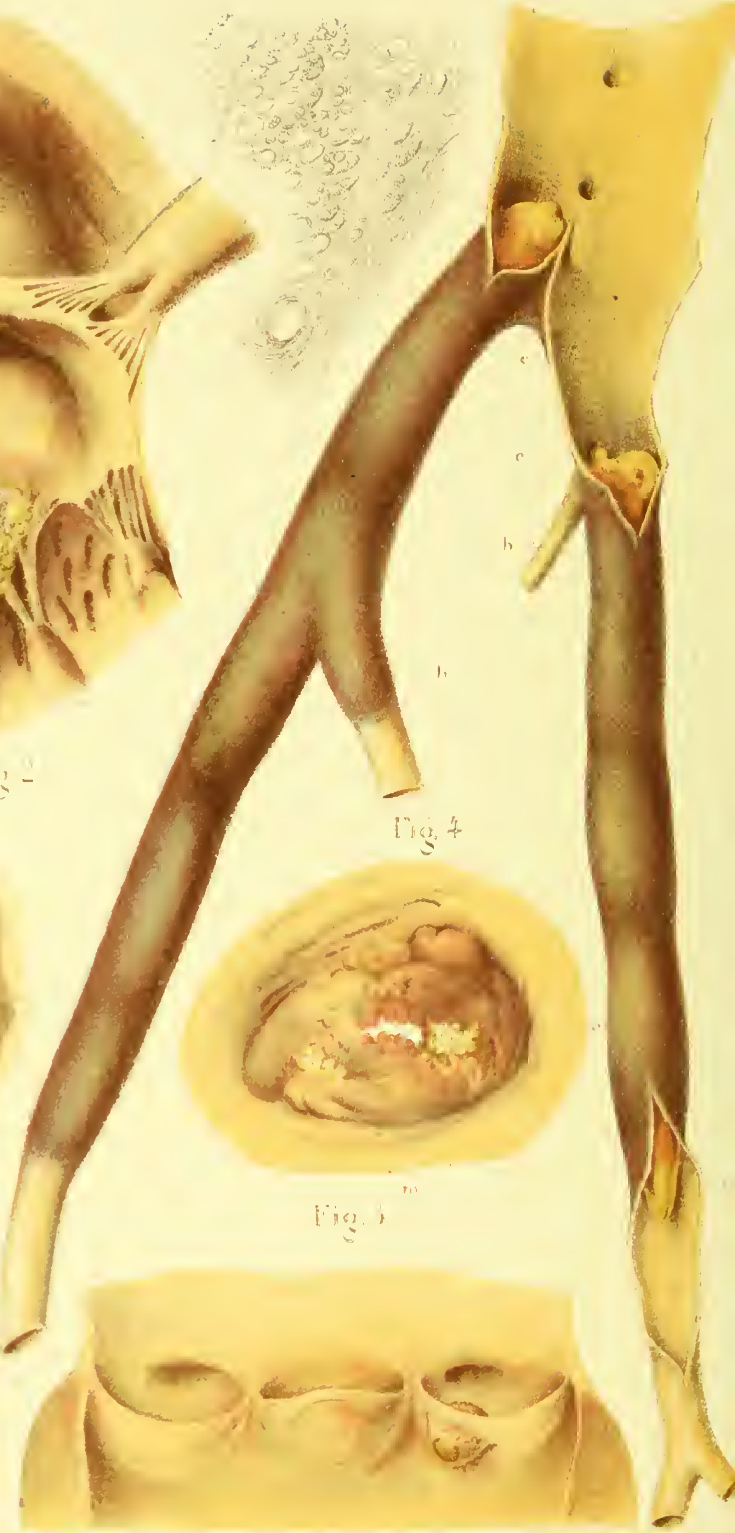


Fig. 1

Fig. 2



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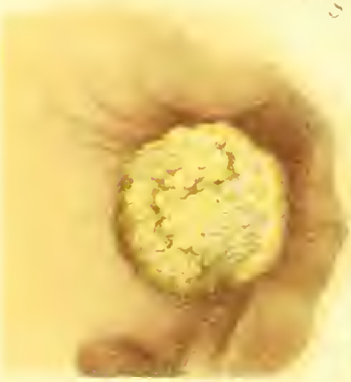

Fig. 4

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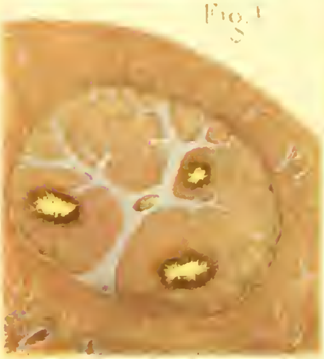


Fig. 5

PLATE LX.

Fig. 1.—Splenadenoma. Part of the spleen invaded by a tumour of violet colour, which is firmer than the parenchyma of the spleen, traversed by vessels, and strewn with reddish spots, *s*, which are marks of old hæmorrhagic foci.

Fig. 1′.—Microscopic drawing of the same tumour. In a reticulated connective tissue network, which is very thick in the neighbourhood of the hæmorrhagic spots, are contained small round cells, which do not differ from the proper cells of the spleen.

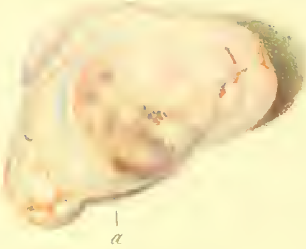
Fig. 2.—Vegetative Endocarditis of Puerperal Origin. The mitral orifice seen from below. *o*, orifice; *c c*, columnæ carneæ subtending the mitral valve; *v*, left segment of valve altered by the presence of numerous vegetations on its auricular surface; *r*, transverse rupture of the valve.

Fig. 2′.—Mitral orifice seen from the auricle. It is obstructed by the upper part of the ruptured mitral valve, *v*.

Fig. 2″.—Aorta at its termination, with the iliac and femoral arteries. The right common iliac, external iliac, and part of the femoral and hypogastric arteries of the same side, are obstructed by fibrinous coagula. On the left side, the hypogastric artery has remained free, the external iliac and femoral arteries are obliterated.

Fig. 3.—Puerperal Endocarditis, with Perforation of the Aortic Valves. The figure represents the aortic orifice open. The valve, *v*, shows considerable tumefaction, with central softening, and a perforation filled by a fibrinous plug. The other valves are healthy.

Fig. 4.—Rheumatic Endocarditis. The mitral orifice, *o*, seen from the appendix, is narrowed to such a degree as barely to admit a quill. The valve, *m*, is elongated, thickened, and uneven, and at some points incrusted with lime salts.



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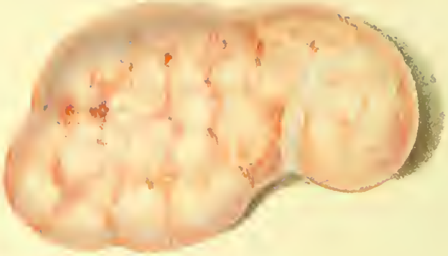

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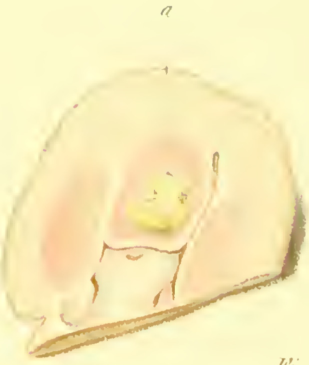

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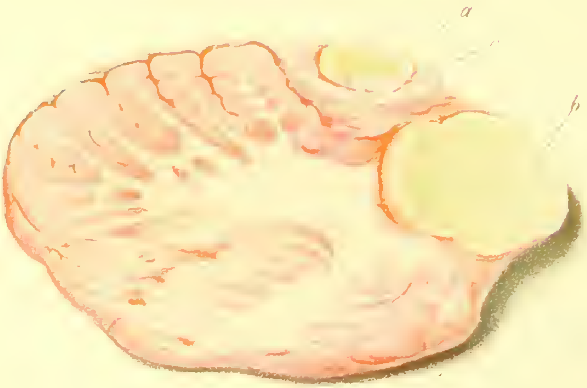

Fig 4

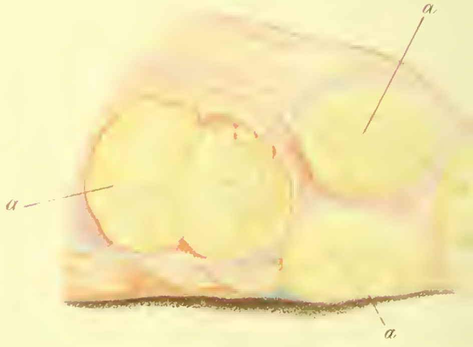

Fig 5

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PLATE LXI.

Figs. 1 and 2.—Enlarged Lymphatic Glands from a case of Lymphadenoma (Hodgkin's Disease), fatal at a comparatively early stage of the disease. Fig. 1 shows a section of the gland, which is mottled with spots of hyperæmia on a pale ground. Here and there are patches of extravasated blood, as at *a*. Fig. 2 shows the external surface of the swollen gland.

Fig. 3.—Caseous Tubercle of the Kidney. A mass of caseous tubercle in the centre of one of the pyramids of the kidney. From the same patient as the pleura in Plate LXIV., Fig. 5.

Fig. 4.—Caseous Tubercular Tumours of the Cerebellum. *a*, smaller nodule in a comparatively early stage, of rosy-grey colour, somewhat gelatinous in appearance, caseating in the centre; it is surrounded by a zone of grey induration, *c*. *b*, a larger mass, more completely caseous, forming a firm yellow tumour, somewhat laminated in structure. This can be readily shelled out from the surrounding brain tissue.

Fig. 5.—Caseous Tubercular Lymphatic Glands (Strumous Lymphadenitis). Section of a mass of enlarged glands, most of them isolated, as at *a a*, or confluent, as at *a′*, and surrounded by greyish fibrous tissue. The sectional surface is mottled with yellowish spots.

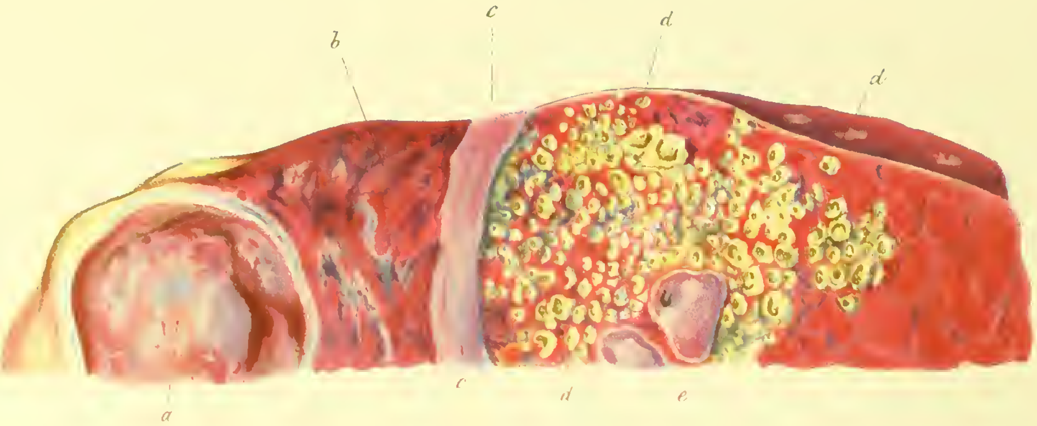
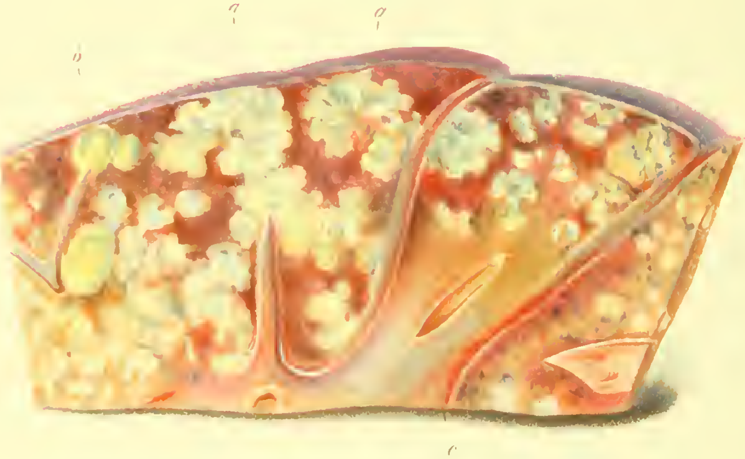


Fig. 1



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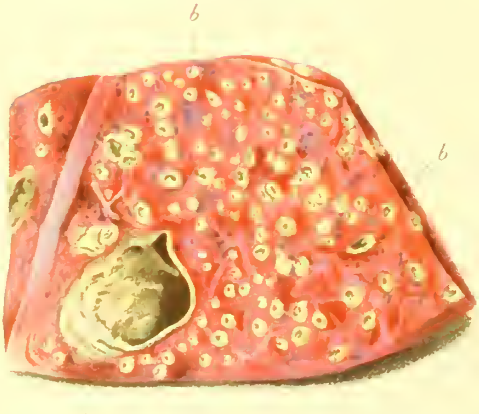

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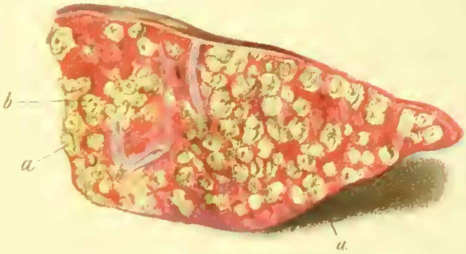

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PLATE LXII.

Fig. 1.—Phthisis, Old and Recent. Segment of left lung at its posterior and outer part, including portions of the upper and lower lobes, from a patient who died of phthisis. *a*, old cavity at apex, with fibroid thickening of the pleura and surrounding lung tissue, the remainder of the upper lobe, *b*, being condensed and indurated. *c*, interlobar pleura united by adhesions and thickened. A rapid extension downwards into the lower lobe in continuity with the old disease has occurred, in the form of rapidly softening caseous tubercle, *d d*. *c*, a small cavity opening into a bronchus. The lower portion of the lung, below that represented, was quite healthy, with the exception of a very few isolated patches of fibroid granulations.

Fig. 2.—Rapid Phthisis, with rapidly caseating and softening yellow tubercle. *a*, small cavity with irregular walls, due to softening of a caseous mass, of which some portions remain; *b b*, softening tubercular nodules, most of which show a minute central cavity.

Fig. 3.—Acute Tuberculosis of the Lung. From a child dying of general tuberculosis with meningitis. *a a*, isolated tubercle nodules, which are yellow and softening in the centre; *b*, a clustered mass of the same situated around a bronchus which is seen running up to the mass.

Fig. 4.—Rapid Phthisis of Caseous Broncho-Pneumonic Form. *a a*, irregular masses, with festooned margin of opaque yellowish-white colour, veined with grey, which are becoming confluent into larger areas. *b*, small cavity formed by softening of caseous material, which has opened into a bronchus; *c*, swollen and infiltrated connective tissue.

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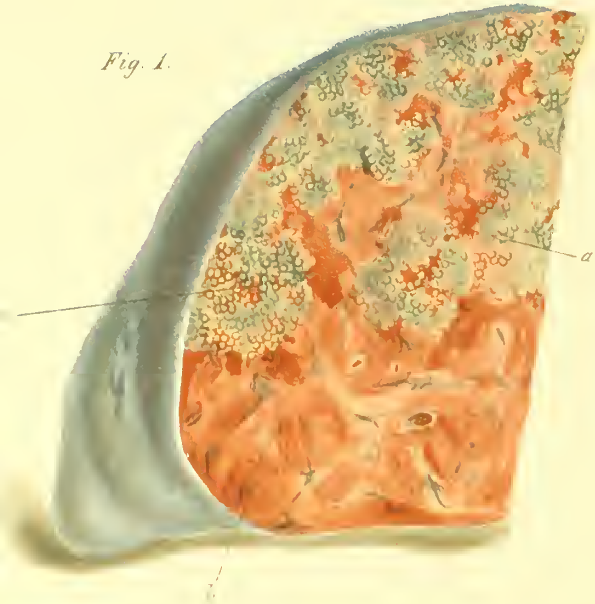

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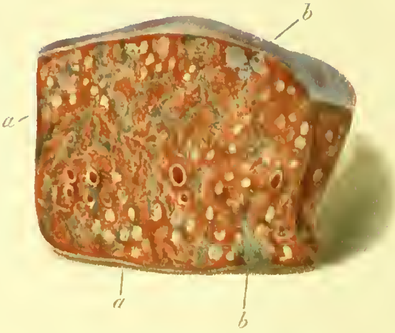

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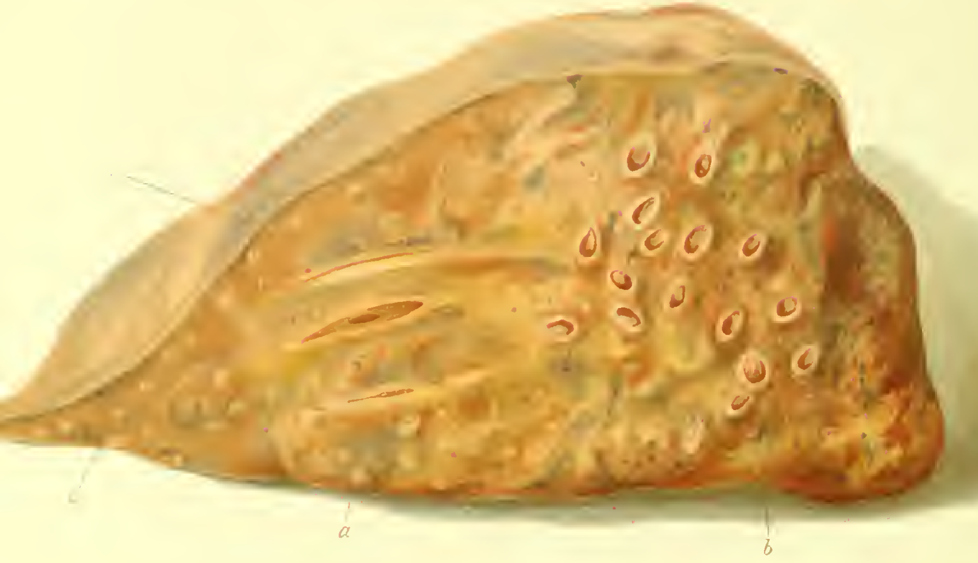

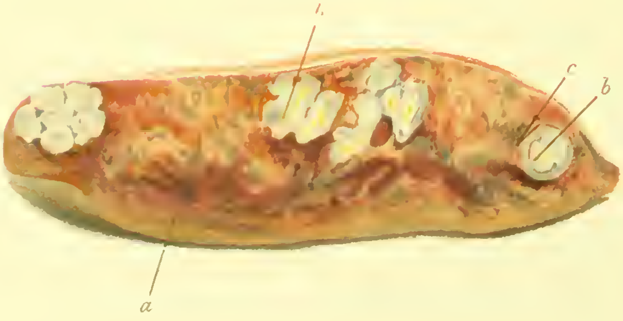

Fig. 3.

PLATE LXIII.

Fig. 1.—Chronic Phthisis. Fibroid tubercle from a case of very chronic fibroid phthisis (fibroid degeneration, Sutton). *a*, masses of minute grey nodules, arranged in clusters of somewhat arborescent form, producing larger areas of continuous infiltration; *b*, healthy lung tissue.

Fig. 2.—Chronic Fibroid Phthisis. Part of the apex of the lung of an old man; the lung tissue much condensed and tough; in it are seen numerous rounded greyish-white spots, *a*, which are of fibrous consistence, and a number of pigmented blackish bands, *b*, many of which contain minute greyish granulations.

Fig. 3.—Chronic Phthisis, showing the scars of old disease, in the form of encapsuled cretified nodules, which are the remains of old caseous masses. *a*, condensed and fibrous lung tissue; *b*, encapsuled cretaceous masses of yellowish colour, surrounded by a fibrous zone, *c*.

Fig. 4.—Consolidation of the Lung from Subacute Broncho-Pneumonia, associated with aortic aneurism. From the lower lobe of the left lung of a man fifty years of age who died from rupture of an aortic aneurism. The consolidated tissue differed from red hepatization in being firmer, smooth, not granular. It contained small yellowish-white, apparently caseous masses, *a a*, which looked something like miliary tubercles, but were not raised above the surface, and under the microscope were made up of fatty and granular matter. *b*, transverse section of bronchi and vessels; *c*, sheaths of bronchi and vessels. (From Dr. Sutton.)

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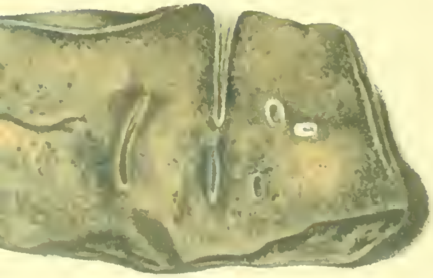

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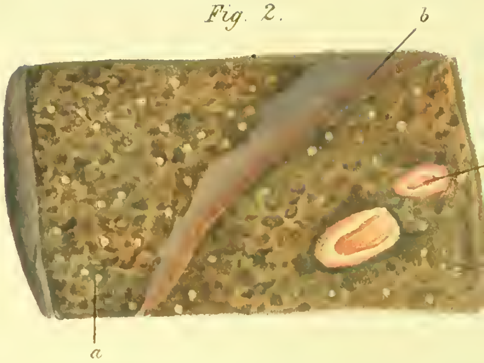

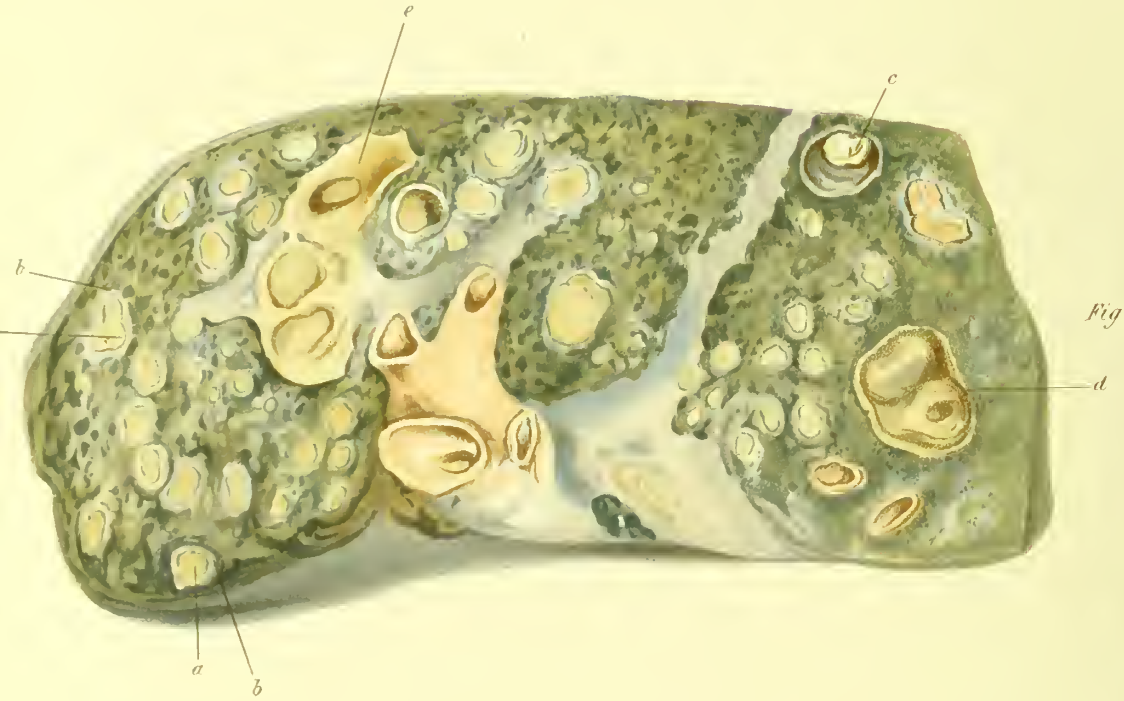

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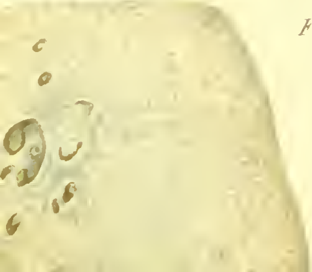

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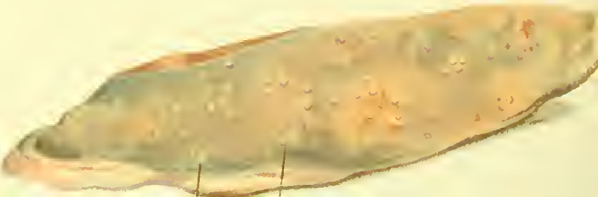

PLATE LXIV.

Fig. 1.—Chronic Phthisis. Grey-granite consolidation, frequently seen at the upper part of the lung in phthisical patients, especially in aged persons dying of phthisis and in intemperate persons (Sutton). The condition closely corresponds with the "iron-grey induration" of Addison.

Fig. 2.—Fibroid Consolidation of the Lung (Granular Induration, Sutton). Another form of fibroid consolidation, very similar to that seen in anthracosis, but with less pigmentation. It is a portion of the lung nearly the whole of which was converted into a similar mass of pigmented induration, which ceased at a pretty definite line in the middle of the lower lobe. Only one small cavity was found; this was in the outer part of the upper lobe, and was apparently formed by ulceration from a dilated bronchus. *a a*, small firm whitish points, each with a central orifice; *b*, thickened fibrous septum; *c*, section of a bronchus.

Fig. 3.—Old Phthisis, partially repaired. Upper lobe of the lung of a patient, eighteen years of age, who had suffered from phthisis. The lung is converted into a mass of bluish-grey tough fibroid tissue, containing masses of putty-like and calcareous matter, apparently the remains of caseous matter and phthisical cavities. The upper lobe of both lungs were in a similar condition. In the lower lobes were many large boiled-rice-like recent tubercular masses. *a a*, cretaceous masses, surrounded by an encapsuling fibrous zone, *b*; *c*, a small cretaceous nodule lying in a smooth cavity with fibrous walls; *d*, a larger cavity communicating with a bronchus; *e*, branch of a pulmonary vein.

Fig. 4.—Syphilitic Pneumonia. "White hepatization" of the lung from a case of congenital syphilis.

Fig. 5.—Tubercle of the Pleura. Piece of pleura from the same case as kidney in Plate LXI., Fig. 3. On it are seen a number of minute tubercular granulations, *a a*. The serous membrane has a dull semi-opaque appearance, indicating an early stage of pleurisy, and in one part is much congested. In the lung were scattered tubercular granulations, many of them peribronchial.

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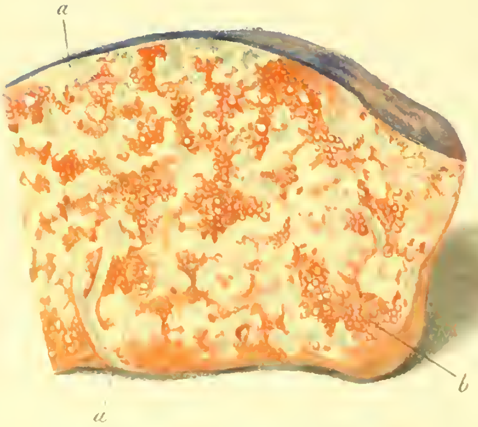

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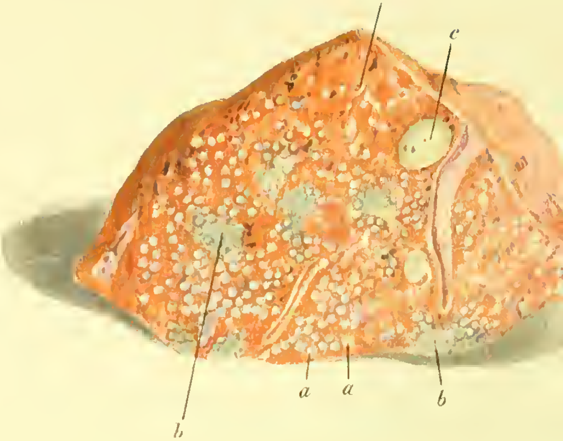

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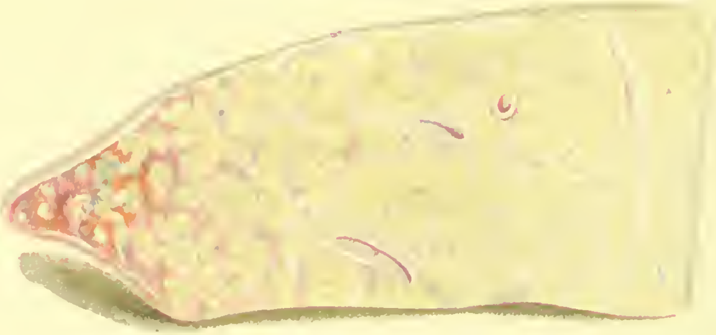

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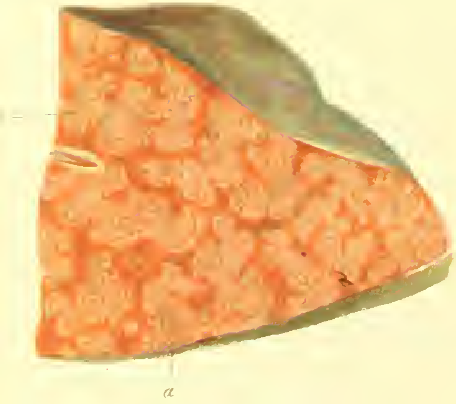

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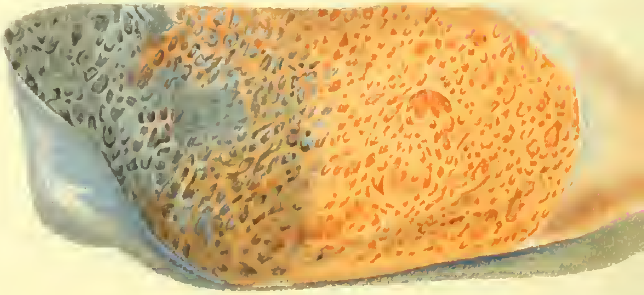

PLATE LXV.

Fig. 1.—Caseating Pneumonia. Part of a lung which has been the seat of acute pneumonia, and is passing into a state of caseation, probably associated with tubercular infiltration. *a a*, yellowish-white caseous patches, having the arrangement usual in phthisis in relation to vessels and bronchi; *b*, hepatized tissue containing whitish granular spots.

Fig. 2.—Acute Tuberculosis of the Lung. *a a*, grey granulations scattered through the lung tissue; *b b*, masses of confluent granulations with commencing central caseation or fibrous change; *c*, a larger yellow caseous tubercular nodule; *d*, sections of small bronchi.

Fig. 3.—Caseous Pneumonia. Part of lung from a case of acute phthisis, in which there is a confluent broncho-pneumonia which has undergone caseation. Towards one end are seen yellow caseating spots surrounded by gelatinous infiltration.

Fig. 4.—Vesicular Pneumonia (Sutton). Confluent lobular pneumonia. There were many isolated circumscribed masses of red hepatization scattered throughout the lower lobes of both lungs, and old fibroid induration in the upper lobes. *a a*, somewhat granular masses paler than the surrounding tissue, these being patches of lobular pneumonia.

Fig. 5.—Atrophy with Induration of the Lung (Sutton). The lung was much smaller than natural; when cut into it presented the appearance seen in the drawing. Everywhere the connective tissue appeared to be much increased, and extending everywhere through the lung was a network of grey fibre-like thready tissue. The lung substance between the network had a dark-blue and much pigmented appearance in one part of the lung, and red in another part. The lung felt tough, but not firm and solid. Some parts sank in water, others floated, but imperfectly. Under the microscope the alveolar walls were very imperfectly defined, many of the air-cells had apparently been destroyed by a process of atrophy.

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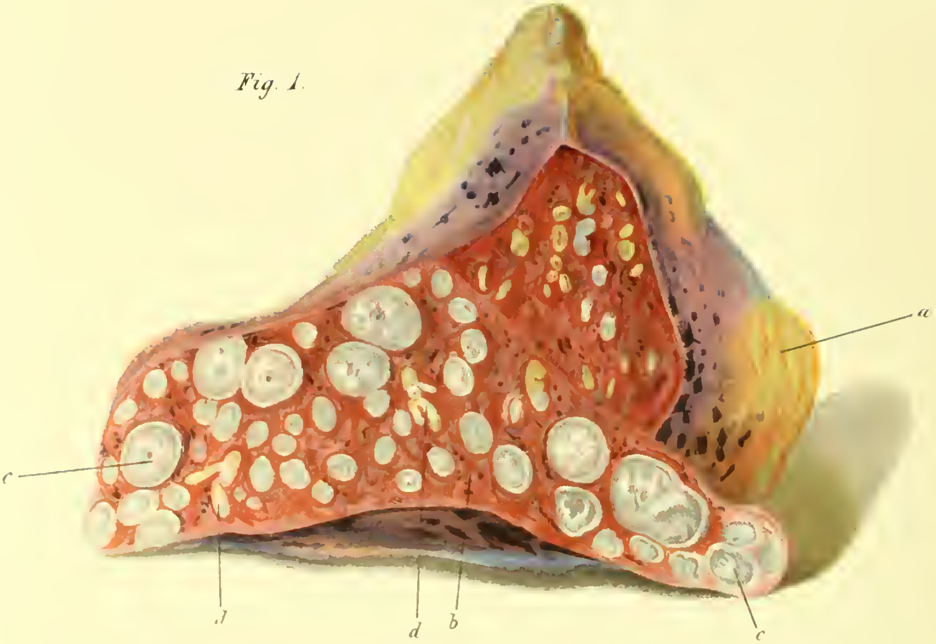

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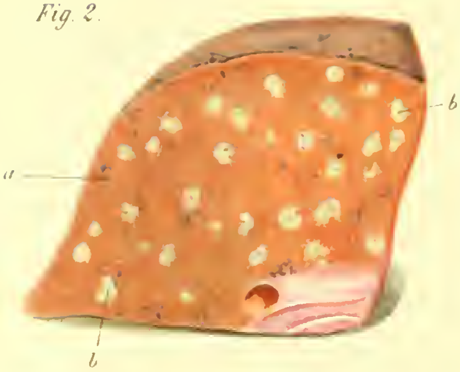

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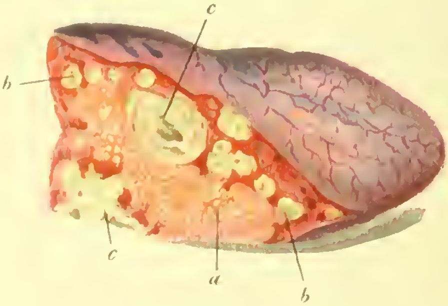

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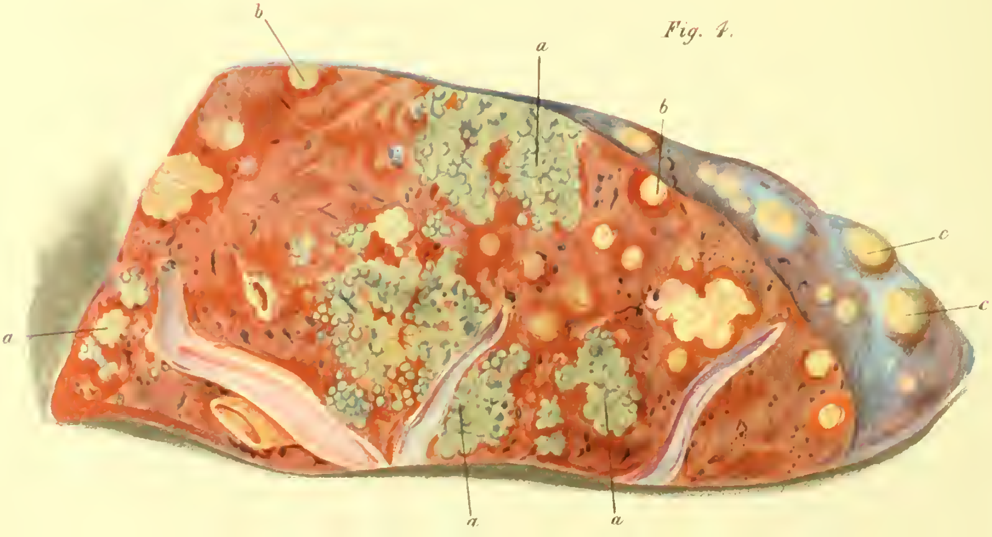


PLATE LXVI.

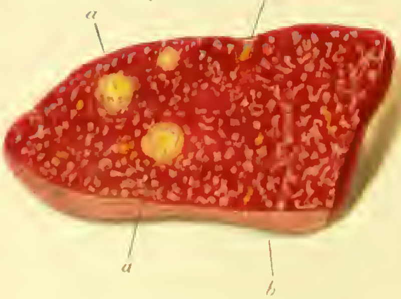
Fig. 1.—MYXO-CHONDROMA OF THE LUNG. Secondary to a myxo-chondromatous tumour of the scapula. *a*, surface of pleura. *b*, lung tissue somewhat condensed and hyperæmic. *c*, masses of new growth, which in the recent state were flickering jelly-like masses, of a somewhat pearly or opaline lustre, sharply defined, owing to the fact that they are contained in distended vessels, which they fill like a mass of injected gelatine. *d*, firmer branching masses, resembling white coral, projecting from the smaller branches of vessels ; these constitute the terminal twigs of the ramified mass which fills the arterial system in this part of the lung. They could be followed by dissection to their junction with the larger trunks.

Fig. 2.—GREY PNEUMONIC HEPATIZATION WITH POINTS OF COMMENCING SUPPURATION. Part of the lung from a case of acute pneumonia in the stage of grey hepatization. *a*, consolidated and granular lung tissue ; *b*, spots of suppuration.

Fig. 3.—TUBERCULOSIS OF THE LUNG. Caseating and softening tubercular masses. *a*, granular reddish-grey infiltration, resembling pneumonic hepatization ; *b*, softening yellow caseous tubercle-nodules ; *c*, cavities formed by softening of similar caseous nodules.

Fig. 4.—FIBROID TUBERCLE OF THE LUNG, with inflammatory caseous nodules (? glanders). *a a*, masses of typical fibroid granulations, forming branching masses, which are more or less conical towards the surface of the lung, arborescent around the bronchi. These are composed of minute rounded granulations, which become confluent and fibrous towards the centre, and are there more pigmented. Towards the free borders of the masses they are whiter and more separate. *b*, firm yellow spots, smooth or very slightly granular on section, sharply defined, and each surrounded by a zone of intense injection (probably "farcy-buds"). *c*, similar nodules projecting on the surface of the lung.

Fig 3



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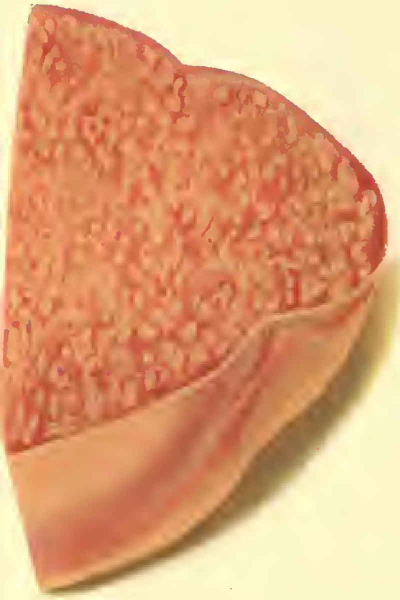

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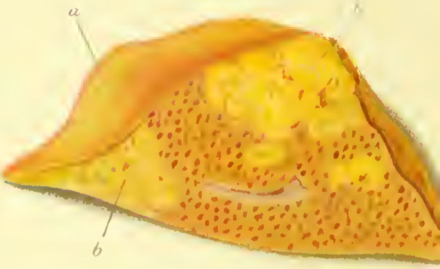

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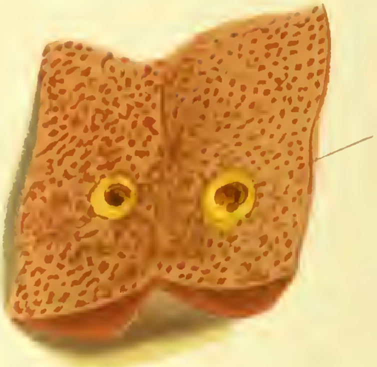

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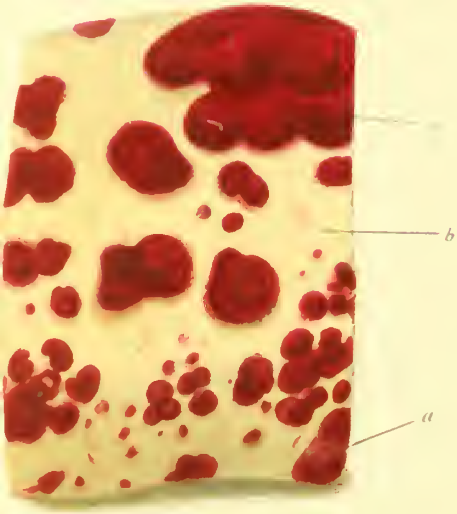

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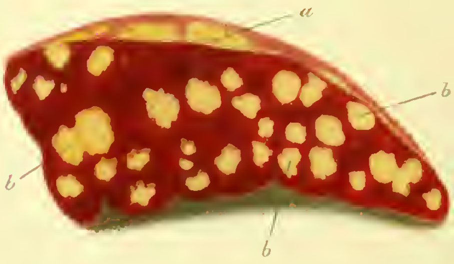


PLATE LXVII.

Fig. 1.—Spleen in Leucocythæmia. Lower end of the spleen from a case of leucocythæmia. The organ was very greatly enlarged, measuring upwards of ten inches in length; firm, smooth on section, and of uniform structure. It presents numerous small, paler, rounded spots on a red ground, and resembles a general hypertrophy of the organ.

Fig. 2.—Kidney in Leucocythæmia. Part of the middle of the kidney from a case of leucocythæmia, fatal from hæmorrhage. The capsule has been stripped off. The substance of the cortex, *b*, is of a dead white colour with a yellowish tinge; through it are scattered very numerous spots of hæmorrhage, *a a*, the larger of which project slightly on the surface; on a vertical section of the cortex these spots were seen to form the bases of conical masses running into the cortex, through which were also scattered numerous streaks and spots of blood extravasation. Microscopically, the tubules were found to be widely separated by masses of leucocytes, which also formed large masses around the vessels and glomeruli; forming the so-called lymphatic new growths in these positions.

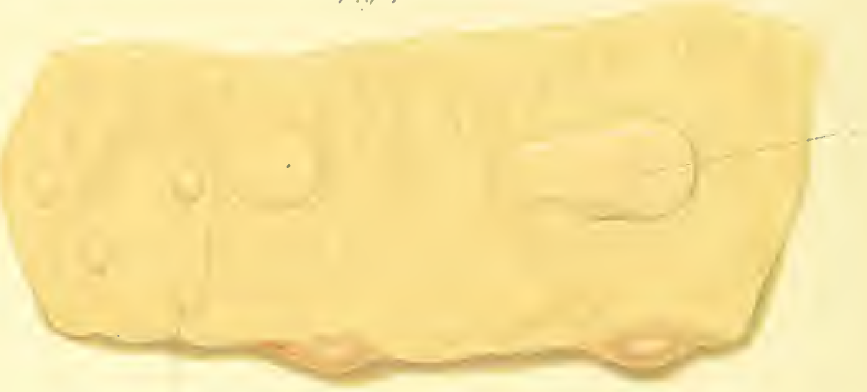
Fig. 3.—Spleen in Lymphadenoma (Hodgkin's Disease). Part of the spleen from a case of lymphadenoma in a boy eleven years old. The spleen was considerably enlarged, of very deep red colour, firm and smooth; in its substance were embedded numerous yellowish nodules, *a a*, some of which were rounded, others elongated, angular, or branching; some were translucent and resembled beeswax, others opaque and semi-caseous. The Malpighian bodies generally appeared larger and more numerous than in the normal condition.

Fig. 4.—Liver in Lymphadenoma (from the same case). The liver contained numerous irregular yellowish masses, most of which were situated near the surface. They appeared to be made up of a number of smaller confluent nodules, which were yellowish and semi-caseous in the centre, and mottled with translucent greyish material. They were moderately firm. Microscopically, they consisted of lymphoid tissue, with a dense reticulum, and contained numerous patches of degeneration. *a*, peritoneal surface; *b*, semi-caseous patches of lymphatic new growth.

Fig. 5.—Softened Yellow Tubercle of the Liver. (From a case of general tuberculosis in a child.) A rounded yellow mass, *a*, softened in the centre into a cyst containing partly inspissated bile, the whole deeply stained with bile. The formation of these tubercles around bile ducts, and the secondary ulceration into the duct and formation of a cyst, has led to their being regarded as "*biliary cysts*" of the liver.

Fig. 6.—Caseous Tubercle of the Spleen. (Portion of the spleen from a case of general tuberculosis.) The spleen, enlarged and hard, and of deep red colour, is thickly studded with firm yellow nodules of various size, which are somewhat sharply outlined, and project a little from the cut surface. This condition is that known as the "hard-bake" spleen. *a*, peritoneal surface, with some local inflammation over subjacent nodules; *b*, yellow tubercular nodules.

Fig 1



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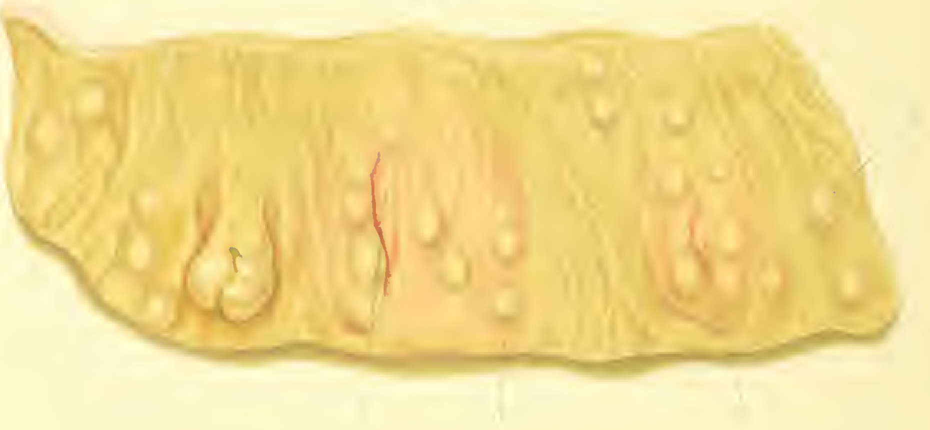

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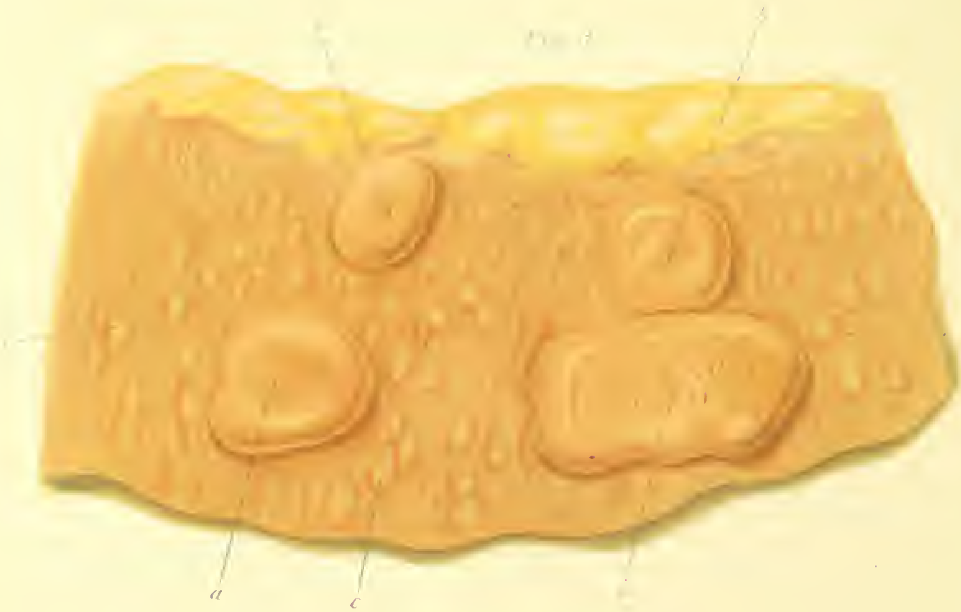


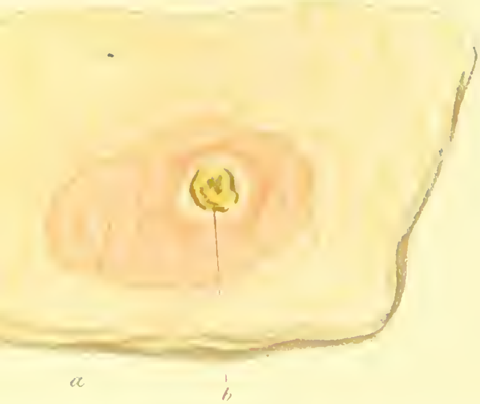
PLATE LXVIII.

Fig. 1.—Chronic Tubercular Ulceration of Intestine. Swelling of Peyer's and solitary glands of intestine in a case of chronic tuberculosis. Most of the agminated and solitary glands were swollen and very firm, not vascular, but of somewhat waxy appearance. There were some small ulcers at the lower part of the small intestine. *a*, swollen Peyer's patch ; *b*, solitary glands.

Fig. 2.—Chronic Tubercular Ulceration of Intestine. From the same case as Fig. 1, lower down in the ileum. The solitary glands, *a a*, are swollen and hard, and there are several small linear ulcers, *b b*, running in a transverse direction, which expose the muscular coat. The form of bowel disease here shown is unusual.

Fig. 3.—Small Intestine in the Early Stage of Enteric Fever. Part of the ileum of a patient, aged twenty-six, who died on the eighth day of severe enteric fever. Throughout the ileum were large raised masses similar to those seen at *a a* and *b b*, due to swelling of the Peyer's and solitary glands. There was no ulceration. The whole intestine was hyperæmic, but the swollen glands much more so, a feature which was lost before the drawing was made. *a a*, swollen and injected Peyer's patches, the *plaques molles* of French authors ; *b b*, similar patches, possibly due to coalescence of swollen solitary follicles ; *c*, swollen solitary glands.

Fig 1



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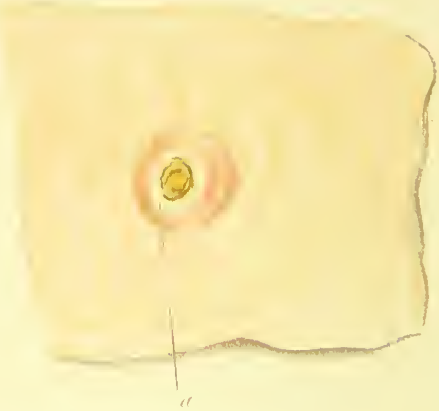

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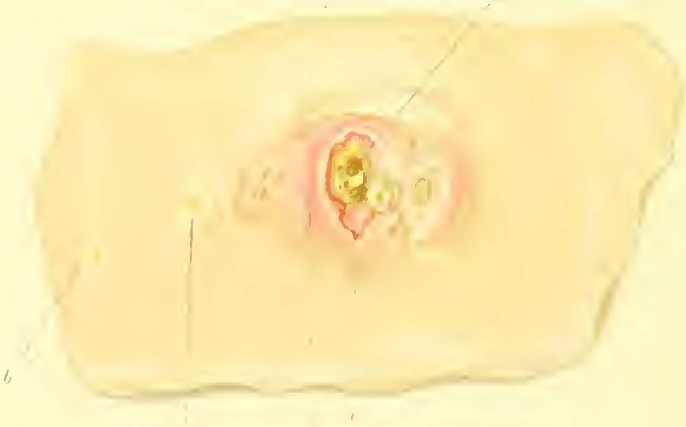

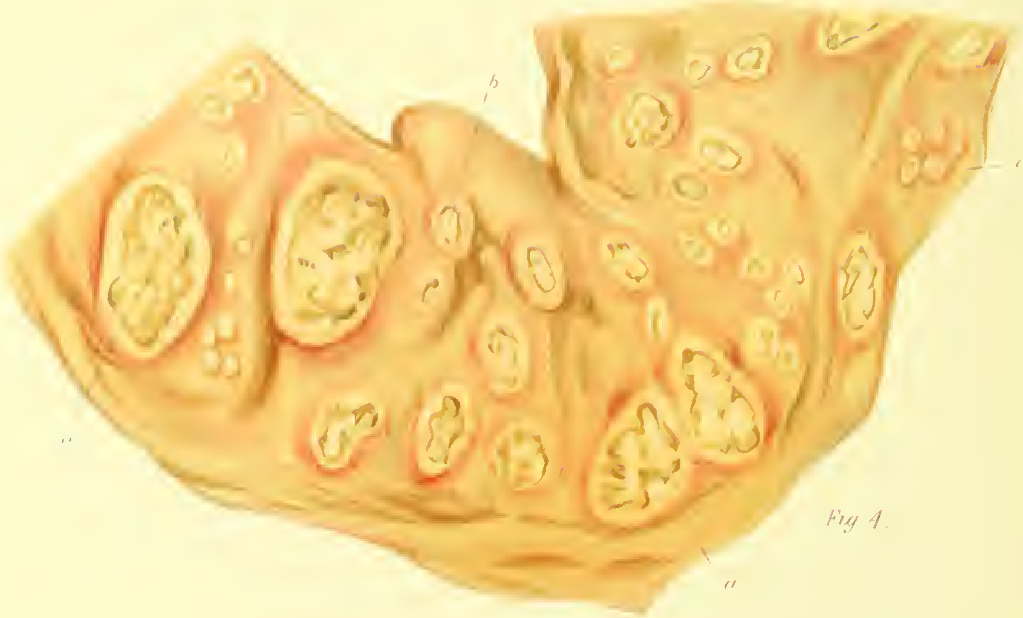

Fig 4.

PLATE LXIX.

Figs. 1, 2, 3.—Intestinal Ulcers in Enteric Fever in the Third Week.

Fig. 1.—Peyer's patch with a small circular ulcer. *a*, swollen Peyer's patch; *b*, central yellow slough which is becoming detached.

Fig. 2.—Ulcer formed in a swollen solitary follicle, *a*. In the centre of the swollen and firm follicle a small yellow slough is separating.

Fig. 3.—Ulcer formed in a Peyer's patch. *a*, swollen Peyer's patch; *b*, swollen solitary gland; *c*, a transverse ulcer with undermined edges, formed in a part of the Peyer's patch. The slough has partly separated, and some hæmorrhage has occurred from the base of the ulcer at *d*.

Fig. 4.—Large Intestine in Chronic Dysentery, following an acute attack. In this form of the disease the ulcers are produced by inflammation of the solitary glands, and may become confluent. *a*, large ulcers; *b*, small ulcer, produced in a single follicle; *c*, swollen glands not yet ulcerated.

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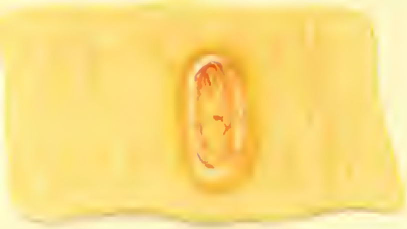
Fig 1



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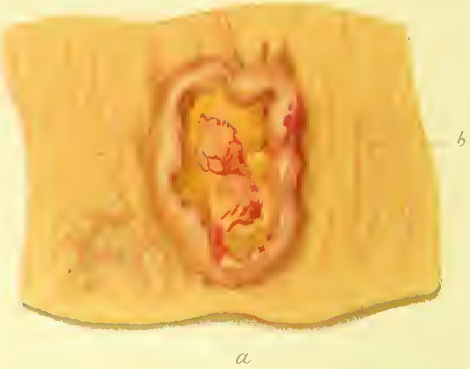

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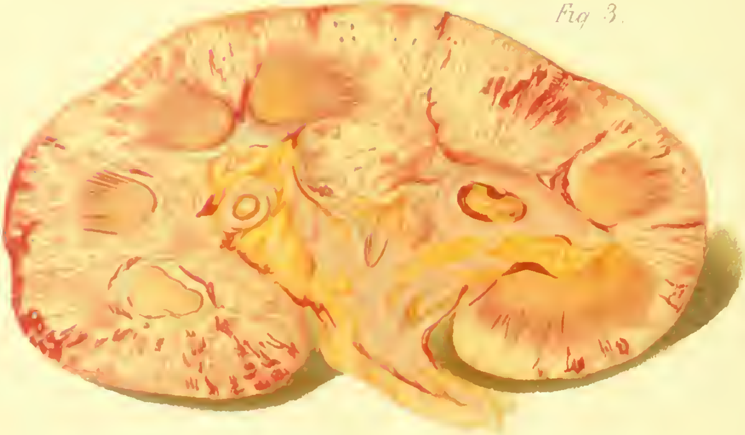

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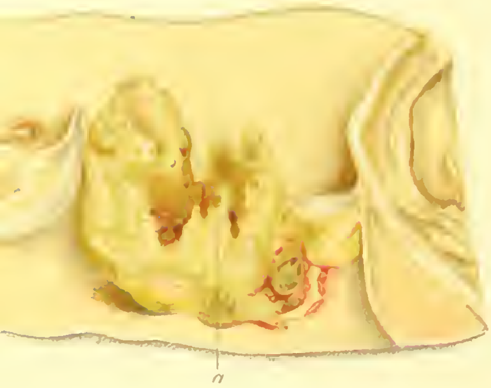

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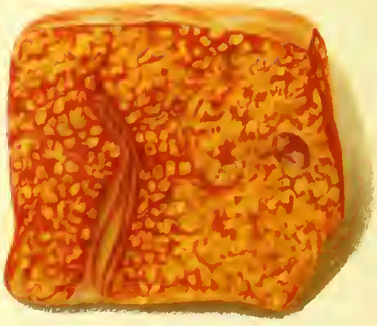

PLATE LXX.

Fig. 1.—Tubercular Ulcer in the Small Intestine. An elliptical transverse ulcer, with thick raised edges; the edges sloping towards the centre of the ulcer.

Fig. 2.—Tubercular Ulcer of the Intestine. A large irregular ulcer with thickened and somewhat nodular edges, which are partially undermined. The ulcer is healing at some parts, and vascular granulation tissue is extending from one edge of the ulcer at *a*, over its base. The scar of an old ulcer is seen below and to the left. *b*, healthy mucous membrane.

Fig. 3.—Kidney in Scarlet Fever. From a case fatal on the sixth day of the disease, with suppression of urine. The cortex is swollen, opaque, yellowish-looking, and contains numerous streaks of hæmorrhage.

Fig. 4.—Fungating Endocarditis of the Aortic Valve. *a*, a segment of the aortic valve which is completely covered by a mass of greenish fungating vegetations, which extend on to the adjacent heart-wall. This form of endocarditis is by some regarded as a mycosis.

Fig. 5.—Nutmeg Liver, from a case of long-standing dilatation of the right side of the heart with tricuspid incompetence.

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